CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

DATA PACKAGE

GENERAL CHEMISTRY

PROJECT NAME : RFP 265

WESTON SOLUTIONS, INC.

Raritan Plaza Suite 201

1090 King Georges Post Road

Edison, NJ - 08837-3703

Phone No: 732-225-6116

ORDER ID : E3847

ATTENTION : Smita Sumbaly

ACCREDITED IN ACCORDANCE WITH nelac

DoD ELAP 310661

CHEMTECH

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Cover Page

Order ID : E3847

Project ID : RFP 265

Client : Weston Solutions, Inc.

Lab Sample Number	Client Sample Number
E3847-01	P001-DG-2087-1
E3847-02	P001-DW-2058-1
E3847-03	P001-DW-2059-1
E3847-04	P001-DW-2060-1
E3847-05	P001-DW-2062-1
E3847-06	P001-DW-2063-1
E3847-07	P001-DW-2065-1
E3847-08	P001-DW-2067-1
E3847-09	P001-DW-2073-1
E3847-10	P001-DW-2074-1
E3847-11	P001-DW-2076-1
E3847-12	P001-DW-2086-1
E3847-13	P001-DW-5001-3
E3847-14	P001-DW-5002-3
E3847-15	P001-DW-5006-3
E3847-16	P001-DW-5006-4
E3847-17	P001-DW-5009-3
E3847-18	P001-DW-5013-3
E3847-19	P001-DW-5023-3
E3847-20	P001-DW-5024-3

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2013.10.02 15:27:18 -05'00'

Date: 10/2/2013

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Weston Solutions, Inc.
Project Name: RFP 265
Project # N/A
Chemtech Project # E3847
Test Name: Corrosivity,Flash Point,Ignitability,Reactive Cyanide,Reactive Sulfide

A. Number of Samples and Date of Receipt:
20 Solid samples were received on 09/25/2013.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Flash Point, Ignitability, RCRA CHARACTERISTICS, Reactive Cyanide and Reactive Sulfide. This data package contains results for Corrosivity,Flash Point,Ignitability,Reactive Cyanide,Reactive Sulfide.

C. Analytical Techniques:
The analysis of Flash Point was based on method 1010A, The analysis of Ignitability was based on method 1030, The analysis of Reactive Cyanide was based on method 9012B, The analysis of Reactive Sulfide was based on method 9034 and The analysis of Corrosivity was based on method 9045C.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

E. Additional Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature__  Mildred V. Reyes, QA/QC Supervisor
2013.10.02 15:27:05 -05'00'

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometric **"AS"** for Semi –Automated Spectrophotometric **"C"** for Manual Spectrophotometric **"T"** for Titrimetric **"NR"** for analyte not required to be analyzed
OR	Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

QA Control # A3040961

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GENERAL CHEMISTRY CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: E3847 MATRIX: Solid

METHOD: 1010A/1030/9012B/9034/9045C

		NA	NO	YES
1.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
2.	Matrix Spike Duplicate Recoveries Met Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range. The Blank Spike met requirements for all samples.			✓
3.	Sample Duplicate Analysis Met QC Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range.			✓
8.	Digestion Holding Time Met If not met, list number of days exceeded for each sample:			✓

ADDITIONAL COMMENTS:

_____ __10/02/13_____

QA REVIEW Date

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: E3847

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

1st Level QA Review Signature: SHELLY GUHA **Date:** 10/02/2013

2nd Level QA Review Signature: Mildred V Reyes Mildred V. Reyes, QA/QC Supervisor 2013.10.02 15:26:35 -05'00' **Date:**

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LAB CHRONICLE

OrderID:	E3847	**OrderDate:**	9/25/2013 1:06:00 PM
Client:	Weston Solutions, Inc.	**Project:**	RFP 265
Contact:	Smita Sumbaly	**Location:**	E62

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
E3847-01	**P001-DG-2087-1**	**SOIL**			**09/25/13 10:00**			**09/25/13**
			Corrosivity	9045C		09/26/13	09/26/13 08:30	
			Ignitability	1030		09/26/13	09/26/13 09:00	
			Reactive Cyanide	9012B		09/26/13	09/26/13 16:50	
			Reactive Sulfide	9034		09/26/13	09/26/13 13:15	
E3847-02	**P001-DW-2058-1**	**SOIL**			**09/25/13 10:10**			**09/25/13**
			Corrosivity	9045C		09/26/13	09/26/13 08:38	
			Flash Point	1010A		09/26/13	09/26/13 11:00	
			Reactive Cyanide	9012B		09/26/13	09/26/13 16:50	
			Reactive Sulfide	9034		09/26/13	09/26/13 13:15	
E3847-03	**P001-DW-2059-1**	**SOIL**			**09/25/13 10:20**			**09/25/13**
			Corrosivity	9045C		09/26/13	09/26/13 08:42	
			Flash Point	1010A		09/26/13	09/26/13 11:00	
			Reactive Cyanide	9012B		09/26/13	09/26/13 16:50	
			Reactive Sulfide	9034		09/26/13	09/26/13 13:15	
E3847-04	**P001-DW-2060-1**	**SOIL**			**09/25/13 10:30**			**09/25/13**
			Corrosivity	9045C		09/26/13	09/26/13 08:46	
			Flash Point	1010A		09/26/13	09/26/13 11:00	
			Reactive Cyanide	9012B		09/26/13	09/26/13 16:57	
			Reactive Sulfide	9034		09/26/13	09/26/13 13:15	
E3847-05	**P001-DW-2062-1**	**SOIL**			**09/25/13 10:40**			**09/25/13**
			Corrosivity	9045C		09/26/13	09/26/13 08:40	
			Flash Point	1010A		09/26/13	09/26/13 11:00	
			Reactive Cyanide	9012B		09/26/13	09/26/13 16:57	
			Reactive Sulfide	9034		09/26/13	09/26/13 13:15	
E3847-06	**P001-DW-2063-1**	**SOIL**			**09/25/13 11:00**			**09/25/13**
			Corrosivity	9045C		09/26/13	09/26/13 08:44	
			Flash Point	1010A		09/26/13	09/26/13 11:00	

LAB CHRONICLE

			Reactive Cyanide	9012B			09/26/13	09/26/13 16:57
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-07	**P001-DW-2065-1**	**SOIL**			**09/25/13**	**11:10**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 08:48
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 16:58
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-08	**P001-DW-2067-1**	**SOIL**			**09/25/13**	**11:15**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 08:52
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 16:58
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-09	**P001-DW-2073-1**	**SOIL**			**09/25/13**	**11:25**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 08:56
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 16:58
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-10	**P001-DW-2074-1**	**SOIL**			**09/25/13**	**11:30**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 09:04
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 16:58
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-11	**P001-DW-2076-1**	**SOIL**			**09/25/13**	**11:35**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 09:12
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 16:58
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-12	**P001-DW-2086-1**	**SOIL**			**09/25/13**	**11:45**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 09:16
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 16:58
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-13	**P001-DW-5001-3**	**SOIL**			**09/24/13**	**15:00**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 09:20
			Flash Point	1010A			09/26/13	09/26/13 11:00

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			Reactive Cyanide	9012B			09/26/13	09/26/13 17:05
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-14	**P001-DW-5002-3**	**SOIL**			**09/24/13**	**15:05**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 09:24
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 17:05
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-15	**P001-DW-5006-3**	**SOIL**			**09/24/13**	**15:10**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 09:28
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 17:05
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-16	**P001-DW-5006-4**	**SOIL**			**09/24/13**	**15:10**		**09/25/13**
			Reactive Cyanide	9012B			09/26/13	09/26/13 17:05
			Corrosivity	9045C			09/26/13	09/26/13 09:32
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-17	**P001-DW-5009-3**	**SOIL**			**09/24/13**	**15:20**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 09:36
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 17:05
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-18	**P001-DW-5013-3**	**SOIL**			**09/24/13**	**15:25**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 09:40
			Flash Point	1010A			09/26/13	09/26/13 11:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 17:05
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-19	**P001-DW-5023-3**	**SOIL**			**09/24/13**	**15:30**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 09:48
			Ignitability	1030			09/26/13	09/26/13 09:00
			Reactive Cyanide	9012B			09/26/13	09/26/13 17:05
			Reactive Sulfide	9034			09/26/13	09/26/13 13:15
E3847-20	**P001-DW-5024-3**	**SOIL**			**09/24/13**	**15:35**		**09/25/13**
			Corrosivity	9045C			09/26/13	09/26/13 09:56
			Flash Point	1010A			09/26/13	09/26/13 11:00

LAB CHRONICLE

Reactive Cyanide	9012B	09/26/13	09/26/13 17:05
Reactive Sulfide	9034	09/26/13	09/26/13 13:15

SAMPLE DATA

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 10:00
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DG-2087-1	SDG No.:	E3847
Lab Sample ID:	E3847-01	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	4.59		1	0	0	0	pH	09/26/13	09/26/13 08:30	SW9045C
Ignitability	YES		1	0	0	0	o C	09/26/13	09/26/13 09:00	1030
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:50	9012B
Reactive Sulfide	38		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=solid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 10:10
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2058-1	SDG No.:	E3847
Lab Sample ID:	E3847-02	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	4.46		1	0	0	0	pH	09/26/13	09/26/13 08:38	SW9045C
Flashpoint	78		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:50	9012B
Reactive Sulfide	37		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 10:20
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2059-1	SDG No.:	E3847
Lab Sample ID:	E3847-03	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	11.97		1	0	0	0	pH	09/26/13	09/26/13 08:42	SW9045C
Flashpoint	92		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.349		1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:50	9012B
Reactive Sulfide	120		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 10:30
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2060-1	SDG No.:	E3847
Lab Sample ID:	E3847-04	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	6.19		1	0	0	0	pH	09/26/13	09/26/13 08:46	SW9045C
Flashpoint	78		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:57	9012B
Reactive Sulfide	42		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 10:40
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2062-1	SDG No.:	E3847
Lab Sample ID:	E3847-05	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	12.19		1	0	0	0	pH	09/26/13	09/26/13 08:40	SW9045C
Flashpoint	80		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.122		1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:57	9012B
Reactive Sulfide	43		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 11:00
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2063-1	SDG No.:	E3847
Lab Sample ID:	E3847-06	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	6.33		1	0	0	0	pH	09/26/13	09/26/13 08:44	SW9045C
Flashpoint	78		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:57	9012B
Reactive Sulfide	40		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 11:10
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2065-1	SDG No.:	E3847
Lab Sample ID:	E3847-07	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	5.11		1	0	0	0	pH	09/26/13	09/26/13 08:48	SW9045C
Flashpoint	76		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:58	9012B
Reactive Sulfide	35		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 11:15
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2067-1	SDG No.:	E3847
Lab Sample ID:	E3847-08	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	4.96		1	0	0	0	pH	09/26/13	09/26/13 08:52	SW9045C
Flashpoint	78		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:58	9012B
Reactive Sulfide	34		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 11:25
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2073-1	SDG No.:	E3847
Lab Sample ID:	E3847-09	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	5.35		1	0	0	0	pH	09/26/13	09/26/13 08:56	SW9045C
Flashpoint	88		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:58	9012B
Reactive Sulfide	38		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 11:30
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2074-1	SDG No.:	E3847
Lab Sample ID:	E3847-10	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	3.94		1	0	0	0	pH	09/26/13	09/26/13 09:04	SW9045C
Flashpoint	76		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:58	9012B
Reactive Sulfide	42		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 11:35
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2076-1	SDG No.:	E3847
Lab Sample ID:	E3847-11	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	4.91		1	0	0	0	pH	09/26/13	09/26/13 09:12	SW9045C
Flashpoint	76		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:58	9012B
Reactive Sulfide	38		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/25/13 11:45
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-2086-1	SDG No.:	E3847
Lab Sample ID:	E3847-12	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	5.87		1	0	0	0	pH	09/26/13	09/26/13 09:16	SW9045C
Flashpoint	76		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 16:58	9012B
Reactive Sulfide	40		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/24/13 15:00
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-5001-3	SDG No.:	E3847
Lab Sample ID:	E3847-13	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	6.61		1	0	0	0	pH	09/26/13	09/26/13 09:20	SW9045C
Flashpoint	76		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.882		1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 17:05	9012B
Reactive Sulfide	43		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/24/13 15:05
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-5002-3	SDG No.:	E3847
Lab Sample ID:	E3847-14	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	6.17		1	0	0	0	pH	09/26/13	09/26/13 09:24	SW9045C
Flashpoint	76		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	1.7		1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 17:05	9012B
Reactive Sulfide	37		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/24/13 15:10
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-5006-3	SDG No.:	E3847
Lab Sample ID:	E3847-15	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	8.14		1	0	0	0	pH	09/26/13	09/26/13 09:28	SW9045C
Flashpoint	108		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 17:05	9012B
Reactive Sulfide	34		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/24/13 15:15
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-5006-4	SDG No.:	E3847
Lab Sample ID:	E3847-16	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	8.16		1	0	0	0	pH	09/26/13	09/26/13 09:32	SW9045C
Flashpoint	82		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 17:05	9012B
Reactive Sulfide	29		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/24/13 15:20
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-5009-3	SDG No.:	E3847
Lab Sample ID:	E3847-17	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	6.15		1	0	0	0	pH	09/26/13	09/26/13 09:36	SW9045C
Flashpoint	84		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 17:05	9012B
Reactive Sulfide	42		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/24/13 15:25
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-5013-3	SDG No.:	E3847
Lab Sample ID:	E3847-18	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	1.81		1	0	0	0	pH	09/26/13	09/26/13 09:40	SW9045C
Flashpoint	78		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 17:05	9012B
Reactive Sulfide	38		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/24/13 15:30
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-5023-3	SDG No.:	E3847
Lab Sample ID:	E3847-19	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	2.66		1	0	0	0	pH	09/26/13	09/26/13 09:48	SW9045C
Ignitability	NO		1	0	0	0	o C	09/26/13	09/26/13 09:00	1030
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 17:05	9012B
Reactive Sulfide	46		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	Weston Solutions, Inc.	Date Collected:	09/24/13 15:35
Project:	RFP 265	Date Received:	09/25/13
Client Sample ID:	P001-DW-5024-3	SDG No.:	E3847
Lab Sample ID:	E3847-20	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity (as pH)	3.17		1	0	0	0	pH	09/26/13	09/26/13 09:56	SW9045C
Flashpoint	82		1	0	0	0	o F	09/26/13	09/26/13 11:00	1010A
Reactive Cyanide	0.05	U	1	0.05	0.05	0.05	mg/Kg	09/26/13	09/26/13 17:05	9012B
Reactive Sulfide	37		1	10	10	10	mg/Kg	09/26/13	09/26/13 13:15	9034

Comments: matrix=liquid waste

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
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E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

QC RESULT SUMMARY

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Initial and Continuing Calibration Verification

Client: Weston Solutions, Inc. **SDG No.:** E3847

Project: RFP 265 **RunNo.:** LB67886

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1						
Corrosivity (as pH)	pH	7.01	7.00	100	90-110	09/26/2013
Sample ID: CCV1						
Corrosivity (as pH)	pH	2.02	2.00	101	90-110	09/26/2013
Sample ID: CCV2						
Corrosivity (as pH)	pH	2.01	2.00	101	90-110	09/26/2013
Sample ID: CCV3						
Corrosivity (as pH)	pH	2.00	2.00	100	90-110	09/26/2013
Sample ID: CCV4						
Corrosivity (as pH)	pH	2.03	2.00	102	90-110	09/26/2013
Sample ID: CCV5						
Corrosivity (as pH)	pH	11.98	12.00	100	90-110	09/26/2013

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Initial and Continuing Calibration Verification

Client:	Weston Solutions, Inc.	**SDG No.:**	E3847
Project:	RFP 265	**RunNo.:**	LB67889

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	**ICV1**						
Flashpoint		o F	80.00	81.50	98	90-110	09/26/2013

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Initial and Continuing Calibration Verification

Client:	Weston Solutions, Inc.	**SDG No.:**	E3847
Project:	RFP 265	**RunNo.:**	LB67898

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: CCV1						
Reactive Cyanide	mg/L	0.24	0.25	96	90-110	09/26/2013
Sample ID: ICV1						
Reactive Cyanide	mg/L	0.10	0.10	100	85-115	09/26/2013
Sample ID: CCV2						
Reactive Cyanide	mg/L	0.24	0.25	96	90-110	09/26/2013
Sample ID: CCV3						
Reactive Cyanide	mg/L	0.25	0.25	100	90-110	09/26/2013
Sample ID: CCV4						
Reactive Cyanide	mg/L	0.25	0.25	100	90-110	09/26/2013

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Initial and Continuing Calibration Verification

Client:	Weston Solutions, Inc.	**SDG No.:**	E3847
Project:	RFP 265	**RunNo.:**	LB67898

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date

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Initial and Continuing Calibration Blank Summary

Client: Weston Solutions, Inc. **SDG No.:** E3847

Project: RFP 265 **RunNo.:** LB67898

Analyte	Units	Result	Acceptance Limits	MDL	RDL	Analysis Date
Sample ID: CCB1						
Reactive Cyanide	mg/L	< 0.005	+/-0.005	0.005	0.005	09/26/2013
Sample ID: ICB1						
Reactive Cyanide	mg/L	< 0.005	+/-0.005	0.005	0.005	09/26/2013
Sample ID: CCB2						
Reactive Cyanide	mg/L	< 0.005	+/-0.005	0.005	0.005	09/26/2013
Sample ID: CCB3						
Reactive Cyanide	mg/L	< 0.005	+/-0.005	0.005	0.005	09/26/2013
Sample ID: CCB4						
Reactive Cyanide	mg/L	< 0.005	+/-0.005	0.005	0.005	09/26/2013

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Initial and Continuing Calibration Blank Summary

Client:	Weston Solutions, Inc.	**SDG No.:**	E3847
Project:	RFP 265	**RunNo.:**	LB67898

Analyte	Units	Result	Acceptance Limits	MDL	RDL	Analysis Date

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Preparation Blank Summary

Client: Weston Solutions, Inc. **SDG No.:** E3847

Project: RFP 265

Analyte	Units	Result	Acceptance Limits	MDL	RDL	Analysis Date
Sample ID: LB67887BLS						
Reactive Sulfide	mg/Kg	< 10.00	+/-10.00	10.00	10.00	09/26/2013
Sample ID: LB67898BLS						
Reactive Cyanide	mg/Kg	< 0.050	+/-0.050	0.050	0.050	09/26/2013

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Matrix Spike Summary

Client: Weston Solutions, Inc.
SDG No.: E3847
Project: RFP 265
Sample ID: E3847-01
Client ID: P001-DG-2087-1S
Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Reactive Cyanide	mg/Kg	48-158	0.57		0.05	U	0.40	1	143		09/26/2013
Reactive Sulfide	mg/Kg	75-125	258.0		38.00		250.00	1	88		09/26/2013

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Duplicate Sample Summary

Client: Weston Solutions, Inc.
SDG No.: E3847
Project: RFP 265
Sample ID: E3847-01
Client ID: P001-DG-2087-1D
Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	Dilution Factor	RPD/ AD	Qual	Analysis Date
Corrosivity (as pH)	pH	+/-20	4.590		4.600		1	0.2		09/26/2013
Reactive Cyanide	mg/Kg	+/-20	0.050	U	0.050	U	1	0		09/26/2013
Ignitability	o C	+/-20	YES		YES		1	0		09/26/2013
Reactive Sulfide	mg/Kg	+/-20	38.00		38.00		1	0		09/26/2013

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Duplicate Sample Summary

Client: Weston Solutions, Inc.
SDG No.: E3847
Project: RFP 265
Sample ID: E3847-02
Client ID: P001-DW-2058-1D
Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	Dilution Factor	RPD/ AD	Qual	Analysis Date
Flashpoint	o F	+/-20	78.00		78.00		1	0		09/26/2013

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Duplicate Sample Summary

Client: Weston Solutions, Inc.
SDG No.: E3847
Project: RFP 265
Sample ID: E3847-10
Client ID: P001-DW-2074-1D
Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	Dilution Factor	RPD/ AD	Qual	Analysis Date
Corrosivity (as pH)	pH	+/-20	3.940		3.950		1	0.3		09/26/2013

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Duplicate Sample Summary

Client: Weston Solutions, Inc.
SDG No.: E3847
Project: RFP 265
Sample ID: E3847-19
Client ID: P001-DW-5023-3D
Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	Dilution Factor	RPD/ AD	Qual	Analysis Date
Corrosivity (as pH)	pH	+/-20	2.660		2.670		1	0.4		09/26/2013

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Duplicate Sample Summary

Client: Weston Solutions, Inc.
SDG No.: E3847
Project: RFP 265
Sample ID: E3848-01
Client ID: P001-DW-5027-3D
Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	Dilution Factor	RPD/ AD	Qual	Analysis Date
Flashpoint	o F	+/-20	78.00		78.00		1	0		09/26/2013

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Duplicate Sample Summary

Client: Weston Solutions, Inc.
SDG No.: E3847
Project: RFP 265
Sample ID: E3848-08
Client ID: P001-DW-6018-3D
Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	Dilution Factor	RPD/ AD	Qual	Analysis Date
Corrosivity (as pH)	pH	+/-20	12.260		12.280		1	0.2		09/26/2013

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Laboratory Control Sample Summary

Client: Weston Solutions, Inc. **SDG No.:** E3847

Project: RFP 265 **Run No.:** LB67887

Analyte	Units	True Value	Result	C	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB67887BSS								
Reactive Sulfide	mg/Kg	250.00	221.00		88	1	80-120	09/26/2013

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Laboratory Control Sample Summary

Client:	Weston Solutions, Inc.	**SDG No.:**	E3847
Project:	RFP 265	**Run No.:**	LB67898

Analyte	Units	True Value	Result	C	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB67898BSS								
Reactive Cyanide	mg/Kg	4.00	3.86		97	1	85-115	09/26/2013

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Method Detection Limits

Client: Weston Solutions, Inc. **SDG No.:** E3847

Project: RFP 265

Analyte	Units	MDL	RDL
Method: 1010A Flashpoint		**MDL Date:**	**01/15/2006**
Matrix Category: LIQUID			
Flashpoint	o F	0.00	0.00
Matrix Category: SOLIDS			
Flashpoint	o F	0.00	0.00
Method: 1030 Ignitability		**MDL Date:**	**01/15/2006**
Matrix Category: SOLIDS			
Ignitability	o C	150.00	150.00
Method: 9012B Reactive Cyanide		**MDL Date:**	**01/15/2006**
Matrix Category: LIQUID			
Reactive Cyanide	mg/L	0.005	0.005
Matrix Category: SOLIDS			
Reactive Cyanide	mg/Kg	0.050	0.050
Method: 9034 Reactive Sulfide		**MDL Date:**	**01/15/2006**
Matrix Category: SOLIDS			
Reactive Sulfide	mg/Kg	10.00	10.00
Method: 9045C Corrosivity		**MDL Date:**	**01/15/2006**
Matrix Category: LIQUID			
Corrosivity (as pH)	pH	0.00	0.00
Matrix Category: SOLIDS			
Corrosivity (as pH)	pH	0.00	0.00

RAW DATA

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-892

Analytical Summary Report

Analysis Method: 9045C Corrosivity
Parameter: Corrosivity
Run Number: LB67886
Instrument: pH Meter

REVIEWED BY: JM

TEMP. = 20.6 °C
SLOPE = 98.7

Seq	Lab ID	Sample Type	Result pH	Dil	Time	Matrix	Analytical Date
1	CAL 4	CAL	4.01	1	8:10 AM	WATER	09/26/2013
2	CAL 7	CAL	7.01	1	8:14	WATER	09/26/2013
3	CAL 10	CAL	10.05	1	8:18 JM 9-26-13	WATER	09/26/2013
4	ICV 7	ICV	7.01	1	8:22	WATER	09/26/2013
5	CCV 2	CCV	2.02	1	8:26	WATER	09/26/2013
6	E3847-01	SAM	4.59	1	8:30	SOIL	09/26/2013
7	E3847-01D	DUP	4.60	1	8:34	SOIL	09/26/2013
8	E3847-02	SAM	4.46	1	8:38	SOIL	09/26/2013
9	E3847-03	SAM	11.97	1	8:42	SOIL	09/26/2013
10	E3847-04	SAM	6.19	1	8:46	SOIL	09/26/2013
11	E3847-05	SAM	12.19	1	8:40	SOIL	09/26/2013
12	E3847-06	SAM	6.33	1	8:44	SOIL	09/26/2013
13	E3847-07	SAM	5.11	1	8:48	SOIL	09/26/2013
14	E3847-08	SAM	4.96	1	8:52	SOIL	09/26/2013
15	E3847-09	SAM	5.35	1	8:56	SOIL	09/26/2013
16	CCV 2	CCV	2.01	1	9:00	WATER	09/26/2013
17	E3847-10	SAM	3.94	1	9:04	SOIL	09/26/2013
18	E3847-10D	DUP	3.95	1	9:08	SOIL	09/26/2013
19	E3847-11	SAM	4.91	1	9:12	SOIL	09/26/2013
20	E3847-12	SAM	5.87	1	9:16	SOIL	09/26/2013
21	E3847-13	SAM	6.61	1	9:20	SOIL	09/26/2013
22	E3847-14	SAM	6.17	1	9:24	SOIL	09/26/2013
23	E3847-15	SAM	8.14	1	9:28	SOIL	09/26/2013
24	E3847-16	SAM	8.16	1	9:32	SOIL	09/26/2013
25	E3847-17	SAM	6.15	1	9:36	SOIL	09/26/2013
26	E3847-18	SAM	1.81	1	9:40	SOIL	09/26/2013
27	CCV 2	CCV	2.00	1	9:44	WATER	09/26/2013
28	E3847-19	SAM	2.66	1	9:48	SOIL	09/26/2013
29	E3847-19D	DUP	2.67	1	9:52	SOIL	09/26/2013
30	E3847-20	SAM	3.17	1	9:56	SOIL	09/26/2013
31	E3848-01	SAM	3.29	1	10:00	SOIL	09/26/2013
32	E3848-02	SAM	3.62	1	10:04	SOIL	09/26/2013
33	E3848-03	SAM	4.00	1	10:08	SOIL	09/26/2013
34	E3848-04	SAM	6.51	1	10:12	SOIL	09/26/2013
35	E3848-05	SAM	6.39	1	10:16	SOIL	09/26/2013
36	E3848-06	SAM	4.38	1	10:20	SOIL	09/26/2013
37	E3848-07	SAM	10.22	1	10:24	SOIL	09/26/2013
38	CCV 2	CCV	2.03	1	10:28	WATER	09/26/2013
39	E3848-08	SAM	12.26	1	10:32	SOIL	09/26/2013
40	E3848-08D	DUP	12.28	1	10:36	SOIL	09/26/2013
41	E3848-09	SAM	13.08	1	10:40	SOIL	09/26/2013
42	E3848-10	SAM	8.07	1	10:44	SOIL	09/26/2013

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Analytical Summary Report

Analysis Method: 9045C Corrosivity
Parameter: Corrosivity
Run Number: LB67886
Instrument: pH Meter

REVIEWED BY: Jm

TEMP. = 20.6 °C
SLOPE = 98.7

Seq	Lab ID	Sample Type	Result pH	Dil	Time	Matrix	Analytical Date
43	CCV 12	CCV	11.98	1	10:48 AM	WATER	09/26/2013

Calibration Standards	Chemtech Log #
pH 4.00	W1812
pH 7.00	W1780
pH 10.00	W1779
(ICV) pH 7.00	W1749
(CCV) pH 2.00	W1657
(CCV) pH 12.00	W1748

True Value of ICV = 7.0. Control Limits [+/- 0.1].

True Value of CCV = 12.1 Control Limits [+/- 0.1].

% Recovery Percentage Difference = _____.

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Analysis Method:	9045C Corrosivity [as pH]
Parameter:	Corrosivity
Run Number:	LB67886
Instrument:	pH Meter

M 9045C, D - pH - 09

Chemtech Consulting Group

Analytical Review Report

Date Printed : 9/27/13
Analyst : JM
Data File : LB67886.MDB

Approved By : MP
Approved Date : 9/27/13
Worksheet # :

Lab Sample ID / Parameter	Client ID		Raw Amt PPB / Final Conc	Dil	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Corrosivity												
CAL	**CAL**				W	9/26/13						
Corrosivity (as		PASS	4.010		4.010						pH	
CAL	**CAL**				W	9/26/13						
Corrosivity (as		PASS	7.010		7.010						pH	
CAL	**CAL**				W	9/26/13						
Corrosivity (as		PASS	10.050		10.05						pH	
ICV1	**ICV1**				W	9/26/13						
Corrosivity (as		PASS	7.010		7.01	100.0	90	110			pH	
CCV1	**CCV1**				W	9/26/13						
Corrosivity (as		PASS	2.020		2.02	101.0	90	110			pH	
E3847-01	**P001-DG-2087-1**			1	S	9/26/13						
Corrosivity (as		PASS	4.590		4.590						pH	
E3847-01D	**P001-DG-2087-1D**			1	S	9/26/13						
Corrosivity (as		PASS	4.600		4.600				0.2	20	pH	
E3847-02	**P001-DW-2058-1**			1	S	9/26/13						
Corrosivity (as		PASS	4.460		4.460						pH	
E3847-05	**P001-DW-2062-1**			1	S	9/26/13						
Corrosivity (as		PASS	12.190		12.19						pH	
E3847-03	**P001-DW-2059-1**			1	S	9/26/13						
Corrosivity (as		PASS	11.970		11.97						pH	
E3847-06	**P001-DW-2063-1**			1	S	9/26/13						
Corrosivity (as		PASS	6.330		6.330						pH	
E3847-04	**P001-DW-2060-1**			1	S	9/26/13						
Corrosivity (as		PASS	6.190		6.190						pH	
E3847-07	**P001-DW-2065-1**			1	S	9/26/13						
Corrosivity (as		PASS	5.110		5.110						pH	
E3847-08	**P001-DW-2067-1**			1	S	9/26/13						
Corrosivity (as		PASS	4.960		4.960						pH	
E3847-09	**P001-DW-2073-1**			1	S	9/26/13						
Corrosivity (as		PASS	5.350		5.350						pH	
CCV2	**CCV2**				W	9/26/13						
Corrosivity (as		PASS	2.010		2.01	101.0	90	110			pH	
E3847-10	**P001-DW-2074-1**			1	S	9/26/13						
Corrosivity (as		PASS	3.940		3.940						pH	
E3847-10D	**P001-DW-2074-1D**			1	S	9/26/13						
Corrosivity (as		PASS	3.950		3.950				0.3	20	pH	
E3847-11	**P001-DW-2076-1**			1	S	9/26/13						
Corrosivity (as		PASS	4.910		4.910						pH	
E3847-12	**P001-DW-2086-1**			1	S	9/26/13						
Corrosivity (as		PASS	5.870		5.870						pH	

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Analytical Review Report

Date Printed : 9/27/13
Analyst : JM
Data File : LB67886.MDB

Approved By :
Approved Date : 9/27/13
Worksheet # :

Lab Sample ID / Parameter	Client ID	Raw Amt PPB / Final Conc	Dil	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Corrosivity											
E3847-13	**P001-DW-5001-3**		1	S	9/26/13						
Corrosivity (as	PASS	6.610		6.610						pH	
E3847-14	**P001-DW-5002-3**		1	S	9/26/13						
Corrosivity (as	PASS	6.170		6.170						pH	
E3847-15	**P001-DW-5006-3**		1	S	9/26/13						
Corrosivity (as	PASS	8.140		8.140						pH	
E3847-16	**P001-DW-5006-4**		1	S	9/26/13						
Corrosivity (as	PASS	8.160		8.160						pH	
E3847-17	**P001-DW-5009-3**		1	S	9/26/13						
Corrosivity (as	PASS	6.150		6.150						pH	
E3847-18	**P001-DW-5013-3**		1	S	9/26/13						
Corrosivity (as	PASS	1.810		1.810						pH	
CCV3	**CCV3**			W	9/26/13						
Corrosivity (as	PASS	2.000		2.00	100.0	90	110			pH	
E3847-19	**P001-DW-5023-3**		1	S	9/26/13						
Corrosivity (as	PASS	2.660		2.660						pH	
E3847-19D	**P001-DW-5023-3D**		1	S	9/26/13						
Corrosivity (as	PASS	2.670		2.670				0.4	20	pH	
E3847-20	**P001-DW-5024-3**		1	S	9/26/13						
Corrosivity (as	PASS	3.170		3.170						pH	
E3848-01	**P001-DW-5027-3**		1	S	9/26/13						
Corrosivity (as	PASS	3.290		3.290						pH	
E3848-02	**P001-DW-5029-3**		1	S	9/26/13						
Corrosivity (as	PASS	3.620		3.620						pH	
E3848-03	**P001-DW-6006-3**		1	S	9/26/13						
Corrosivity (as	PASS	4.000		4.000						pH	
E3848-04	**P001-DW-6009-3**		1	S	9/26/13						
Corrosivity (as	PASS	6.510		6.510						pH	
E3848-05	**P001-DW-6010-3**		1	S	9/26/13						
Corrosivity (as	PASS	6.390		6.390						pH	
E3848-06	**P001-DW-6011-3**		1	S	9/26/13						
Corrosivity (as	PASS	4.380		4.380						pH	
E3848-07	**P001-DW-6017-3**		1	S	9/26/13						
Corrosivity (as	PASS	10.220		10.22						pH	
CCV4	**CCV4**			W	9/26/13						
Corrosivity (as	PASS	2.030		2.03	102.0	90	110			pH	
E3848-08	**P001-DW-6018-3**		1	S	9/26/13						
Corrosivity (as	PASS	12.260		12.26						pH	
E3848-08D	**P001-DW-6018-3D**		1	S	9/26/13						
Corrosivity (as	PASS	12.280		12.280				0.2	20	pH	

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Analytical Review Report

Date Printed : 9/27/13
Analyst : JM
Data File : LB67886.MDB

Approved By :
Approved Date : 9/27/13
Worksheet # :

Lab Sample ID / Parameter	Client ID		Raw Amt PPB	Dil / Final Conc	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Corrosivity												
E3848-09	**P001-DW-6021-3**			1	S	9/26/13						
Corrosivity (as		PASS	13.080	13.08							pH	
E3848-10	**P001-DW-6024-3**			1	S	9/26/13						
Corrosivity (as		PASS	8.070	8.070							pH	
CCV5	**CCV5**				W	9/26/13						
Corrosivity (as		PASS	11.980	11.98		100.0	90	110			pH	

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Analytical Summary Report

Analysis Method: 9045C Corrosivity [as pH]
Parameter: Corrosivity
Run Number: LB67886
Instrument: pH Meter

REVIEW:
REVIEWED BY:

Seq	Lab ID	Sample Type	Result pH	Dil	Time	Matrix	Analytical Date
1	CAL	CAL	4.01	1		WATER	9/26/13
2	CAL	CAL	7.01	1		WATER	9/26/13
3	CAL	CAL	10.05	1		WATER	9/26/13
4	ICV	ICV	7.01	1		WATER	9/26/13
5	CCV	CCV	2.02	1		WATER	9/26/13
6	E3847-01	SAM	4.59	1		SOIL	9/26/13
7	E3847-01D	DUP	4.60	1		SOIL	9/26/13
8	E3847-02	SAM	4.46	1		SOIL	9/26/13
9	E3847-03	SAM	11.97	1		SOIL	9/26/13
10	E3847-04	SAM	6.19	1		SOIL	9/26/13
11	E3847-05	SAM	12.19	1		SOIL	9/26/13
12	E3847-06	SAM	6.33	1		SOIL	9/26/13
13	E3847-07	SAM	5.11	1		SOIL	9/26/13
14	E3847-08	SAM	4.96	1		SOIL	9/26/13
15	E3847-09	SAM	5.35	1		SOIL	9/26/13
16	CCV	CCV	2.01	1		WATER	9/26/13
17	E3847-10	SAM	3.94	1		SOIL	9/26/13
18	E3847-10D	DUP	3.95	1		SOIL	9/26/13
19	E3847-11	SAM	4.91	1		SOIL	9/26/13
20	E3847-12	SAM	5.87	1		SOIL	9/26/13
21	E3847-13	SAM	6.61	1		SOIL	9/26/13
22	E3847-14	SAM	6.17	1		SOIL	9/26/13
23	E3847-15	SAM	8.14	1		SOIL	9/26/13
24	E3847-16	SAM	8.16	1		SOIL	9/26/13
25	E3847-17	SAM	6.15	1		SOIL	9/26/13
26	E3847-18	SAM	1.81	1		SOIL	9/26/13
27	CCV	CCV	2.00	1		WATER	9/26/13
28	E3847-19	SAM	2.66	1		SOIL	9/26/13
29	E3847-19D	DUP	2.67	1		SOIL	9/26/13
30	E3847-20	SAM	3.17	1		SOIL	9/26/13
31	E3848-01	SAM	3.29	1		SOIL	9/26/13
32	E3848-02	SAM	3.62	1		SOIL	9/26/13
33	E3848-03	SAM	4.00	1		SOIL	9/26/13
34	E3848-04	SAM	6.51	1		SOIL	9/26/13
35	E3848-05	SAM	6.39	1		SOIL	9/26/13
36	E3848-06	SAM	4.38	1		SOIL	9/26/13
37	E3848-07	SAM	10.22	1		SOIL	9/26/13
38	CCV	CCV	2.03	1		WATER	9/26/13
39	E3848-08	SAM	12.26	1		SOIL	9/26/13
40	E3848-08D	DUP	12.28	1		SOIL	9/26/13
41	E3848-09	SAM	13.08	1		SOIL	9/26/13
42	E3848-10	SAM	8.07	1		SOIL	9/26/13
43	CCV	CCV	11.98	1		WATER	9/26/13

9-27-13

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-892

Analytical Summary Report

Analysis Method: 9034 Reactive Sulfide
Parameter: Reactive Sulfide
Run Number: LB67887
Instrument: Titrametric

ANALYST : J m
REVIEWED BY: pb

Standard Type: LCSS Lot #: WP 28900 Concentration: 25 PPm
Titrant 1 = Iodine W1756 Titrant 2 = Sodium Thiosulfate W1700
Normality 1 = 0.025 Normality 2 = 0.025
Constant = 16000 Starch - W1805

Formula = ((Titrant 1 * Normality 1) - (Titrant 2 * Normality 2)) * Constant / ml of Sample

Seq	Lab ID	Sample Type	~~mL~~ g of Sample	mL Titrant 1	Normality 1	mL Titrant 2	Normality 2	Initial pH	Analytical Date
1	LB67887BLS	MB	5.00	5.00	0.025	5.00	0.025		9-26-13
2	LB67887BSS	LCS	5.00	5.00		2.24			
3	E3847-01	SAM	5.00	5.00		4.52			
4	E3847-01D	DUP	5.00	5.00		4.52			
5	E3847-01S	MS	5.00	5.00		1.78			
6	E3847-02	SAM	5.00	5.00		4.54			
7	E3847-03	SAM	5.00	5.00		3.56			
8	E3847-04	SAM	5.00	5.00		4.48			
9	E3847-05	SAM	5.00	5.00		4.46			
10	E3847-06	SAM	5.00	5.00		4.50			
11	E3847-07	SAM	5.00	5.00		4.56			
12	E3847-08	SAM	5.00	5.00		4.58			
13	E3847-09	SAM	5.00	5.00		4.52			
14	E3847-10	SAM	5.00	5.00		4.48			
15	E3847-11	SAM	5.00	5.00		4.52			
16	E3847-12	SAM	5.00	5.00		4.50			
17	E3847-13	SAM	5.00	5.00		4.46			
18	E3847-14	SAM	5.00	5.00		4.54			
19	E3847-15	SAM	5.00	5.00		4.58			
20	E3847-16	SAM	5.00	5.00		4.64			
21	E3847-17	SAM	5.00	5.00		4.48			
22	E3847-18	SAM	5.00	5.00		4.52			
23	E3847-19	SAM	5.02	5.00		4.42			
24	E3847-20	SAM	5.00	5.00		4.54			

JM 9-26-13

Start time 1:15 PM
End time 2:30 PM

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-892

Analysis Method: 9034 Reactive Sulfide
Parameter: Reactive Sulfide
Run Number: LB67887

Instrument: Titrimetric

M 9034 - SM 4500 S F Sulfide -09

Chemtech Consulting Group

Analytical Review Report

Date Printed : 9/27/13
Analyst : JM
Data File : LB67887.MDB

Approved By :
Approved Date : 9/27/13
Worksheet # :

Lab Sample ID / Parameter	Client ID		Raw Amt PPB / Final Conc	Dil	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Reactive Sulfide												
LB67887BLS	**LB67887BLS**				S	9/26/13						
Reactive Sulfide		PASS	0.000		0.00			+/-10.0000			mg/Kg	
LB67887BSS	**LB67887BSS**				S	9/26/13						
Reactive Sulfide		PASS	220.800		221.00	88.0	80.00	120.00			mg/Kg	
E3847-01	**P001-DG-2087-1**			1	S	9/26/13						
Reactive Sulfide		PASS	38.400		38.00						mg/Kg	
E3847-01D	**P001-DG-2087-1D**			1	S	9/26/13						
Reactive Sulfide		PASS	38.400		38.00				0	20	mg/Kg	
E3847-01S	**P001-DG-2087-1S**			1	S	9/26/13						
Reactive Sulfide		PASS	257.600		258.0	88.0	75	125			mg/Kg	
E3847-02	**P001-DW-2058-1**			1	S	9/26/13						
Reactive Sulfide		PASS	36.800		37.00						mg/Kg	
E3847-03	**P001-DW-2059-1**			1	S	9/26/13						
Reactive Sulfide		PASS	115.200		120.00						mg/Kg	
E3847-04	**P001-DW-2060-1**			1	S	9/26/13						
Reactive Sulfide		PASS	41.600		42.00						mg/Kg	
E3847-05	**P001-DW-2062-1**			1	S	9/26/13						
Reactive Sulfide		PASS	43.200		43.00						mg/Kg	
E3847-06	**P001-DW-2063-1**			1	S	9/26/13						
Reactive Sulfide		PASS	40.000		40.00						mg/Kg	
E3847-07	**P001-DW-2065-1**			1	S	9/26/13						
Reactive Sulfide		PASS	35.200		35.00						mg/Kg	
E3847-08	**P001-DW-2067-1**			1	S	9/26/13						
Reactive Sulfide		PASS	33.600		34.00						mg/Kg	
E3847-09	**P001-DW-2073-1**			1	S	9/26/13						
Reactive Sulfide		PASS	38.400		38.00						mg/Kg	
E3847-10	**P001-DW-2074-1**			1	S	9/26/13						
Reactive Sulfide		PASS	41.600		42.00						mg/Kg	
E3847-11	**P001-DW-2076-1**			1	S	9/26/13						
Reactive Sulfide		PASS	38.400		38.00						mg/Kg	
E3847-12	**P001-DW-2086-1**			1	S	9/26/13						
Reactive Sulfide		PASS	40.000		40.00						mg/Kg	
E3847-13	**P001-DW-5001-3**			1	S	9/26/13						
Reactive Sulfide		PASS	43.200		43.00						mg/Kg	
E3847-14	**P001-DW-5002-3**			1	S	9/26/13						
Reactive Sulfide		PASS	36.800		37.00						mg/Kg	
E3847-15	**P001-DW-5006-3**			1	S	9/26/13						
Reactive Sulfide		PASS	33.600		34.00						mg/Kg	
E3847-16	**P001-DW-5006-4**			1	S	9/26/13						
Reactive Sulfide		PASS	28.800		29.00						mg/Kg	

Chemtech Consulting Group

Analytical Review Report

Date Printed : 9/27/13
Analyst : JM
Data File : LB67887.MDB

Approved By :
Approved Date : 9/27/13
Worksheet # :

Lab Sample ID / Parameter	Client ID	Raw Amt PPB / Final Conc	Dil	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Reactive Sulfide											
E3847-17	**P001-DW-5009-3**		1	S	9/26/13						
Reactive Sulfide	PASS	41.600			42.00					mg/Kg	
E3847-18	**P001-DW-5013-3**		1	S	9/26/13						
Reactive Sulfide	PASS	38.400			38.00					mg/Kg	
E3847-19	**P001-DW-5023-3**		1	S	9/26/13						
Reactive Sulfide	PASS	46.215			46.00					mg/Kg	
E3847-20	**P001-DW-5024-3**		1	S	9/26/13						
Reactive Sulfide	PASS	36.800			37.00					mg/Kg	

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Analytical Summary Report

Analysis Method: 9034 Reactive Sulfide
Parameter: Reactive Sulfide
Run Number: LB67887
Instrument: Titrimetric

ANALYST RUN: Jm
REVIEWED BY: AB

Standard Type: LCSS / LCSD **Lot #:** WP28900 **Concentration:** 25PPM

Titrant 1 = Iodine Solutions W1756 **Titrant 2 =** Sodium Thiosulphate W1700

Normality 1 = 0.0250N **Normality 2 =** 0.0250N

Constant = 16000 Starch W1805

Formula = ((Titrant 1 * Normality 1) - (Titrant 2 * Normality 2)) * Constant / ml of Sample

Seq	Lab ID	Sample Type	~~mL~~ g of Sample	ml Titrant 1	Normality 1	ml Titrant 2	Normality 2	Result ppm/~~ppb~~	Analytical Date
1	LB67887BLS	MB	5.00	5.00	0.025	5.00	0.025	0.000	9/26/13
2	LB67887BSS	LCS	5.00	5.00	0.025	2.24	0.025	220.800	9/26/13
3	E3847-01	SAM	5.00	5.00	0.025	4.52	0.025	38.400	9/26/13
4	E3847-01D	DUP	5.00	5.00	0.025	4.52	0.025	38.400	9/26/13
5	E3847-01S	MS	5.00	5.00	0.025	1.78	0.025	257.600	9/26/13
6	E3847-02	SAM	5.00	5.00	0.025	4.54	0.025	36.800	9/26/13
7	E3847-03	SAM	5.00	5.00	0.025	3.56	0.025	115.200	9/26/13
8	E3847-04	SAM	5.00	5.00	0.025	4.48	0.025	41.600	9/26/13
9	E3847-05	SAM	5.00	5.00	0.025	4.46	0.025	43.200	9/26/13
10	E3847-06	SAM	5.00	5.00	0.025	4.50	0.025	40.000	9/26/13
11	E3847-07	SAM	5.00	5.00	0.025	4.56	0.025	35.200	9/26/13
12	E3847-08	SAM	5.00	5.00	0.025	4.58	0.025	33.600	9/26/13
13	E3847-09	SAM	5.00	5.00	0.025	4.52	0.025	38.400	9/26/13
14	E3847-10	SAM	5.00	5.00	0.025	4.48	0.025	41.600	9/26/13
15	E3847-11	SAM	5.00	5.00	0.025	4.52	0.025	38.400	9/26/13
16	E3847-12	SAM	5.00	5.00	0.025	4.50	0.025	40.000	9/26/13
17	E3847-13	SAM	5.00	5.00	0.025	4.46	0.025	43.200	9/26/13
18	E3847-14	SAM	5.00	5.00	0.025	4.54	0.025	36.800	9/26/13
19	E3847-15	SAM	5.00	5.00	0.025	4.58	0.025	33.600	9/26/13
20	E3847-16	SAM	5.00	5.00	0.025	4.64	0.025	28.800	9/26/13
21	E3847-17	SAM	5.00	5.00	0.025	4.48	0.025	41.600	9/26/13
22	E3847-18	SAM	5.00	5.00	0.025	4.52	0.025	38.400	9/26/13
23	E3847-19	SAM	5.02	5.00	0.025	4.42	0.025	46.215	9/26/13
24	E3847-20	SAM	5.00	5.00	0.025	4.54	0.025	36.800	9/26/13

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-892

Analytical Summary Report

Analysis Method: 1010A Flashpoint
Parameter: Flashpoint
Run Number: LB67889
Instrument: KOEHLER

JM

Seq	Lab ID	Client ID	Sample Type	Temp. °F	Dil	Analytical Date
1	ICV	ICV	ICV	80.0	1	9/26/2013
2	E3847-02	P001-DW-2058-1	SAM	78.0	1	9/26/2013
3	E3847-02D	P001-DW-2058-1D	DUP	78.0	1	9/26/2013
4	E3847-03	P001-DW-2059-1	SAM	92.0	1	9/26/2013
5	E3847-04	P001-DW-2060-1	SAM	78.0	1	9/26/2013
6	E3847-05	P001-DW-2062-1	SAM	80.0	1	9/26/2013
7	E3847-06	P001-DW-2063-1	SAM	78.0	1	9/26/2013
8	E3847-07	P001-DW-2065-1	SAM	76.0	1	9/26/2013
9	E3847-08	P001-DW-2067-1	SAM	78.0	1	9/26/2013
10	E3847-09	P001-DW-2073-1	SAM	88.0	1	9/26/2013
11	E3847-10	P001-DW-2074-1	SAM	76.0	1	9/26/2013
12	E3847-11	P001-DW-2076-1	SAM	76.0	1	9/26/2013
13	E3847-12	P001-DW-2086-1	SAM	76.0	1	9/26/2013
14	E3847-13	P001-DW-5001-3	SAM	76.0	1	9/26/2013
15	E3847-14	P001-DW-5002-3	SAM	76.0	1	9/26/2013
16	E3847-15	P001-DW-5006-3	SAM	108.0	1	9/26/2013
17	E3847-16	P001-DW-5006-4	SAM	82.0	1	9/26/2013
18	E3847-17	P001-DW-5009-3	SAM	84.0	1	9/26/2013
19	E3847-18	P001-DW-5013-3	SAM	78.0	1	9/26/2013
20	E3847-20	P001-DW-5024-3	SAM	82.0	1	9/26/2013
21	E3848-01	P001-DW-5027-3	SAM	78.0	1	9/26/2013
22	E3848-01D	P001-DW-5027-3D	DUP	78.0	1	9/26/2013
23	E3848-02	P001-DW-5029-3	SAM	84.0	1	9/26/2013
24	E3848-03	P001-DW-6006-3	SAM	78.0	1	9/26/2013
25	E3848-04	P001-DW-6009-3	SAM	78.0	1	9/26/2013
26	E3848-05	P001-DW-6010-3	SAM	76.0	1	9/26/2013
27	E3848-07	P001-DW-6017-3	SAM	80.0	1	9/26/2013
28	E3848-08	P001-DW-6018-3	SAM	80.0	1	9/26/2013
29	E3848-09	P001-DW-6021-3	SAM	78.0	1	9/26/2013
30	E3848-10	P001-DW-6024-3	SAM	88.0	1	9/26/2013

Start time 11:00 AM

End time 6:30 PM

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-892

Analysis Method: 1010A Flashpoint
Parameter: Flashpoint
Run Number: LB67889
Instrument: KOEHLER

M1010A - Flash Point - 09

Chemtech Consulting Group

Analytical Review Report

Date Printed : 9/27/13
Analyst : JM
Data File : LB67889.MDB

Approved By :
Approved Date : 9/27/13
Worksheet # :

Lab Sample ID / Parameter	Client ID	Raw Amt PPB / Final Conc	Dil	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Flashpoint											
ICV1	**ICV1**			**W**	**9/26/13**						
Flashpoint	PASS	80.000		80.00	98.0	90	110			o F	
E3847-02	**P001-DW-2058-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	78.000		78.000						o F	
E3847-02D	**P001-DW-2058-1D**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	78.000		78.00				0	20	o F	
E3847-03	**P001-DW-2059-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	92.000		92.000						o F	
E3847-04	**P001-DW-2060-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	78.000		78.000						o F	
E3847-05	**P001-DW-2062-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	80.000		80.000						o F	
E3847-06	**P001-DW-2063-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	78.000		78.000						o F	
E3847-07	**P001-DW-2065-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	76.000		76.000						o F	
E3847-08	**P001-DW-2067-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	78.000		78.000						o F	
E3847-09	**P001-DW-2073-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	88.000		88.000						o F	
E3847-10	**P001-DW-2074-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	76.000		76.000						o F	
E3847-11	**P001-DW-2076-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	76.000		76.000						o F	
E3847-12	**P001-DW-2086-1**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	76.000		76.000						o F	
E3847-13	**P001-DW-5001-3**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	76.000		76.000						o F	
E3847-14	**P001-DW-5002-3**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	76.000		76.000						o F	
E3847-15	**P001-DW-5006-3**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	108.000		108						o F	
E3847-16	**P001-DW-5006-4**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	82.000		82.000						o F	
E3847-17	**P001-DW-5009-3**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	84.000		84.000						o F	
E3847-18	**P001-DW-5013-3**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	78.000		78.000						o F	
E3847-20	**P001-DW-5024-3**		**1**	**S**	**9/26/13**						
Flashpoint	PASS	82.000		82.000						o F	

Chemtech Consulting Group

Analytical Review Report

Date Printed : 9/27/13
Analyst : JM
Data File : LB67889.MDB
Approved By :
Approved Date : 9/28/13
Worksheet # :

Lab Sample ID / Parameter	Client ID	Raw Amt PPB / Final Conc	Dil	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Flashpoint											
E3848-01	**P001-DW-5027-3**		1	S	9/26/13						
Flashpoint	PASS	78.000		78.000						o F	
E3848-01D	**P001-DW-5027-3D**		1	S	9/26/13						
Flashpoint	PASS	78.000		78.00				0	20	o F	
E3848-02	**P001-DW-5029-3**		1	S	9/26/13						
Flashpoint	PASS	84.000		84.000						o F	
E3848-03	**P001-DW-6006-3**		1	S	9/26/13						
Flashpoint	PASS	78.000		78.000						o F	
E3848-04	**P001-DW-6009-3**		1	S	9/26/13						
Flashpoint	PASS	78.000		78.000						o F	
E3848-05	**P001-DW-6010-3**		1	S	9/26/13						
Flashpoint	PASS	76.000		76.000						o F	
E3848-07	**P001-DW-6017-3**		1	S	9/26/13						
Flashpoint	PASS	80.000		80.000						o F	
E3848-08	**P001-DW-6018-3**		1	S	9/26/13						
Flashpoint	PASS	80.000		80.000						o F	
E3848-09	**P001-DW-6021-3**		1	S	9/26/13						
Flashpoint	PASS	78.000		78.000						o F	
E3848-10	**P001-DW-6024-3**		1	S	9/26/13						
Flashpoint	PASS	88.000		88.000						o F	

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Analytical Summary Report

Analysis Method: 1010A Flashpoint
Parameter: Flashpoint
Run Number: LB67889
Instrument: KOEHLER

Seq	Lab ID	Client ID	Sample Type	Inst Conc. °C / °F	Dil	Analytical Date
1	ICV	ICV	ICV	80.000	1	9/26/13
2	E3847-02	P001-DW-2058-1	SAM	78.000	1	9/26/13
3	E3847-02D	P001-DW-2058-1D	DUP	78.000	1	9/26/13
4	E3847-03	P001-DW-2059-1	SAM	92.000	1	9/26/13
5	E3847-04	P001-DW-2060-1	SAM	78.000	1	9/26/13
6	E3847-05	P001-DW-2062-1	SAM	80.000	1	9/26/13
7	E3847-06	P001-DW-2063-1	SAM	78.000	1	9/26/13
8	E3847-07	P001-DW-2065-1	SAM	76.000	1	9/26/13
9	E3847-08	P001-DW-2067-1	SAM	78.000	1	9/26/13
10	E3847-09	P001-DW-2073-1	SAM	88.000	1	9/26/13
11	E3847-10	P001-DW-2074-1	SAM	76.000	1	9/26/13
12	E3847-11	P001-DW-2076-1	SAM	76.000	1	9/26/13
13	E3847-12	P001-DW-2086-1	SAM	76.000	1	9/26/13
14	E3847-13	P001-DW-5001-3	SAM	76.000	1	9/26/13
15	E3847-14	P001-DW-5002-3	SAM	76.000	1	9/26/13
16	E3847-15	P001-DW-5006-3	SAM	108.000	1	9/26/13
17	E3847-16	P001-DW-5006-4	SAM	82.000	1	9/26/13
18	E3847-17	P001-DW-5009-3	SAM	84.000	1	9/26/13
19	E3847-18	P001-DW-5013-3	SAM	78.000	1	9/26/13
20	E3847-20	P001-DW-5024-3	SAM	82.000	1	9/26/13
21	E3848-01	P001-DW-5027-3	SAM	78.000	1	9/26/13
22	E3848-01D	P001-DW-5027-3D	DUP	78.000	1	9/26/13
23	E3848-02	P001-DW-5029-3	SAM	84.000	1	9/26/13
24	E3848-03	P001-DW-6006-3	SAM	78.000	1	9/26/13
25	E3848-04	P001-DW-6009-3	SAM	78.000	1	9/26/13
26	E3848-05	P001-DW-6010-3	SAM	76.000	1	9/26/13
27	E3848-07	P001-DW-6017-3	SAM	80.000	1	9/26/13
28	E3848-08	P001-DW-6018-3	SAM	80.000	1	9/26/13
29	E3848-09	P001-DW-6021-3	SAM	78.000	1	9/26/13
30	E3848-10	P001-DW-6024-3	SAM	88.000	1	9/26/13

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax: 908-789-892

Analytical Summary Report

Analysis Method: 1030 Ignitability
Parameter: Ignitability
Run Number: LB67891
Instrument: FLAME
Analyst: JM

REVIEW BY: Jm

Seq	Lab ID	Sample Type	Result °C		Matrix	Analytical Date
1	E3847-01	SAM	YES	NO	SOIL	9/26/2013
2	E3847-01D	DUP	YES	NO	SOIL	9/26/2013
3	E3847-19	SAM	YES	NO	SOIL	9/26/2013
4	E3848-06	SAM	YES	NO	SOIL	9/26/2013

Start time 9:00 Am
End time 10:10 Am

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax:

Analysis Method:	1030 IGNITABILITY
Parameter:	Ignitability
Run Number:	LB67891
Instrument:	FLAME

M1030-Ignitability-08

Chemtech Consulting Group

Analytical Review Report

Date Printed : 9/27/13
Analyst : JM
Data File : LB67891.MDB

Approved By : [signature]
Approved Date : 9/28/13
Worksheet # :

Lab Sample ID / Parameter	Client ID	Raw Amt PPB	Dil / Final Conc	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Ignitability											
E3847-01	**P001-DG-2087-1**		1	S	9/26/13						
Ignitability	PASS	0.000	YES							o C	
E3847-01D	**P001-DG-2087-1D**		1	S	9/26/13						
Ignitability	PASS	0.000	YES					0	20	o C	
E3847-19	**P001-DW-5023-3**		1	S	9/26/13						
Ignitability	PASS	0.000	NO							o C	
E3848-06	**P001-DW-6011-3**		1	S	9/26/13						
Ignitability	PASS	0.000	NO							o C	

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908-789-8900 Fax:

Analytical Summary Report

Analysis Method: 1030 IGNITABILITY
Parameter: Ignitability
Run Number: LB67891
Instrument: FLAME
Analyst:

REVIEWED BY: Jm

Seq	Lab ID	Sample Type	Result °C	Time	Matrix	Analytical Date
1	E3847-01	SAM	YES		SOIL	9/26/13
2	E3847-01D	DUP	YES		SOIL	9/26/13
3	E3847-19	SAM	NO		SOIL	9/26/13
4	E3848-06	SAM	NO		SOIL	9/26/13

Jm 9-27-13

CHEMTECH
284 Sheffield Street,
Mountainside, NJ 07092
Reviewed by : HM

9/26/2013 17:12

Test: ~~Total~~ Reactive CN

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	96.292	0.0	0.088	
ICB1	0.564	0.0	0.005	
CCV1	242.491	0.0	0.214	
CCB1	0.577	0.0	0.005	
LB67898BLS	0.556	0.0	0.005	
LB67898BSS	385.962	0.0	0.337	
E3847-01	0.441	0.0	0.005	
E3847-01D	1.420	0.0	0.006	
E3847-01S	57.172	0.0	0.054	
E3847-02	0.300	0.0	0.005	
E3847-03	34.911	0.0	0.035	
E3847-04	-0.043	0.0	0.005	
E3847-05	12.185	0.0	0.015	
E3847-06	-0.111	0.0	0.005	
CCV2	243.340	0.0	0.214	
CCB2	0.601	0.0	0.005	
E3847-07	-0.357	0.0	0.004	
E3847-08	0.257	0.0	0.005	
E3847-09	-0.445	0.0	0.004	
E3847-10	-0.443	0.0	0.004	
E3847-11	-0.232	0.0	0.004	
E3847-12	-0.492	0.0	0.004	
E3847-13	88.168	0.0	0.081	
E3847-14	167.933	0.0	0.149	
E3847-15	-0.114	0.0	0.005	
E3847-~~15~~16 HM 09/26/13	0.017	0.0	0.005	
CCV3	246.300	0.0	0.217	
CCB3	0.511	0.0	0.005	
E3847-17	-0.355	0.0	0.004	
E3847-18	0.137	0.0	0.005	
E3847-19	-0.297	0.0	0.004	
E3847-20	-0.193	0.0	0.004	
CCV4	246.137	0.0	0.217	
CCB4	-0.321	0.0	0.004	

N	34
Mean	53.614
SD	101.5617
CV%	189.43

Aquakem v. 7.2AQ1
Results from time period:
Thu Sep 26 16:50:24 2013
Thu Sep 26 17:08:19 2013

Sample Id	Sam/Ctr/c/	Test short name	Test type	Result	Result unit	Result date and time	Stat
0.0PPBCN	A	Reactive CN	P	-0.1434	µg/l	9/26/2013 9:23:23	
5.0PPBCN	A	Reactive CN	P	3.9101	µg/l	9/26/2013 9:23:24	
10PPBCN	A	Reactive CN	P	9.1419	µg/l	9/26/2013 9:23:25	
50PPBCN	A	Reactive CN	P	50.5493	µg/l	9/26/2013 9:23:26	
100PPBCN	A	Reactive CN	P	99.9091	µg/l	9/26/2013 9:23:27	
250PPBCN	A	Reactive CN	P	253.2835	µg/l	9/26/2013 9:23:28	
500PPBCN	A	Reactive CN	P	498.3495	µg/l	9/26/2013 9:23:29	
LOW	S	Reactive CN	P	10.1946	µg/l	9/26/2013 9:42:32	
HIGH	S	Reactive CN	P	527.6351	µg/l	9/26/2013 9:42:33	
ICV1	S	Reactive CN	P	96.2923	µg/l	9/26/2013 16:50:24	
ICB1	S	Reactive CN	P	0.5645	µg/l	9/26/2013 16:50:25	
CCV1	S	Reactive CN	P	242.4913	µg/l	9/26/2013 16:50:26	
CCB1	S	Reactive CN	P	0.577	µg/l	9/26/2013 16:50:27	
LB67898BLS	S	Reactive CN	P	0.5562	µg/l	9/26/2013 16:50:28	
LB67898BSS	S	Reactive CN	P	385.9619	µg/l	9/26/2013 16:50:29	
E3847-01	S	Reactive CN	P	0.441	µg/l	9/26/2013 16:50:30	
E3847-01D	S	Reactive CN	P	1.4203	µg/l	9/26/2013 16:50:31	
E3847-01S	S	Reactive CN	P	57.1725	µg/l	9/26/2013 16:50:32	
E3847-02	S	Reactive CN	P	0.3002	µg/l	9/26/2013 16:50:33	
E3847-03	S	Reactive CN	P	34.9105	µg/l	9/26/2013 16:50:34	
E3847-04	S	Reactive CN	P	-0.0431	µg/l	9/26/2013 16:57:56	
E3847-05	S	Reactive CN	P	12.1845	µg/l	9/26/2013 16:57:57	
E3847-06	S	Reactive CN	P	-0.1107	µg/l	9/26/2013 16:57:58	
CCV2	S	Reactive CN	P	243.3405	µg/l	9/26/2013 16:57:59	
CCB2	S	Reactive CN	P	0.6013	µg/l	9/26/2013 16:58:00	
E3847-07	S	Reactive CN	P	-0.357	µg/l	9/26/2013 16:58:01	
E3847-08	S	Reactive CN	P	0.2566	µg/l	9/26/2013 16:58:02	
E3847-09	S	Reactive CN	P	-0.4451	µg/l	9/26/2013 16:58:03	
E3847-10	S	Reactive CN	P	-0.4434	µg/l	9/26/2013 16:58:04	
E3847-11	S	Reactive CN	P	-0.232	µg/l	9/26/2013 16:58:05	
E3847-12	S	Reactive CN	P	-0.4917	µg/l	9/26/2013 16:58:06	
E3847-13	S	Reactive CN	P	88.1683	µg/l	9/26/2013 17:05:31	
E3847-14	S	Reactive CN	P	167.9327	µg/l	9/26/2013 17:05:32	
E3847-15	S	Reactive CN	P	-0.1142	µg/l	9/26/2013 17:05:33	
E3847-16	S	Reactive CN	P	0.0171	µg/l	9/26/2013 17:05:34	
CCV3	S	Reactive CN	P	246.3004	µg/l	9/26/2013 17:05:35	
CCB3	S	Reactive CN	P	0.5113	µg/l	9/26/2013 17:05:36	
E3847-17	S	Reactive CN	P	-0.355	µg/l	9/26/2013 17:05:37	
E3847-18	S	Reactive CN	P	0.1365	µg/l	9/26/2013 17:05:38	
E3847-19	S	Reactive CN	P	-0.2975	µg/l	9/26/2013 17:05:39	
E3847-20	S	Reactive CN	P	-0.1927	µg/l	9/26/2013 17:05:40	
CCV4	S	Reactive CN	P	246.1367	µg/l	9/26/2013 17:05:41	
CCB4	S	Reactive CN	P	-0.3207	µg/l	9/26/2013 17:08:19	

CHEMTECH
284 Sheffield Street,
Mountainside, NJ 07092
Reviewed by :

9/26/2013 9:27

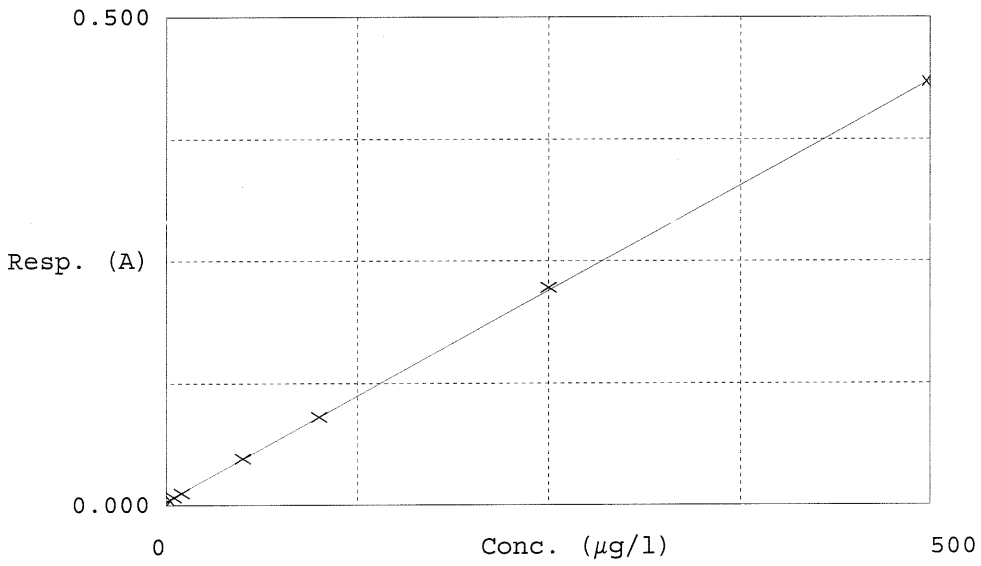
Test Total CN

Accepted 9/26/2013 9:27

Factor 1161
Bias 0.005

Coeff. of det. 0.999923

Errors Meas. error



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.0PPBCN	0.004	-0.1434	0.0000	
2	5.0PPBCN	0.008	3.9101	5.0000	
3	10PPBCN	0.012	9.1419	10.0000	
4	50PPBCN	0.048	50.5493	50.0000	
5	100PPBCN	0.091	99.9091	100.0000	
6	250PPBCN	0.223	253.2835	250.0000	
7	500PPBCN	0.434	498.3495	500.0000	Blank resp. high

CHEMTECH
284 Sheffield Street,
Mountainside, NJ 07092
Reviewed by : NM

9/26/2013 9:44

Test: Total CN

Sample Id	Result	Dil. 1 +	Response	Errors
LOW	10.195	0.0	0.013	
HIGH	527.635	0.0	0.459	Test limit high

N	2
Mean	268.915
SD	365.8857
CV%	136.06

Chemtech Consulting Group

Analytical Review Report

Date Printed : 9/30/13
Analyst : HM
Data File : lb67898.csv

Approved By : RB
Approved Date : 9/30/13
Worksheet # :

M9012 A-B - Total, Amenable and Reactive cyanide-13

Lab Sample ID / Parameter	Client ID		Raw Amt PPB / Final Conc	Dil	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Reactive Cyanide												
0.0PPBCN	**0.0PPBCN**				W	9/26/13						
Reactive Cyanide		PASS	-0.143		-0.000						mg/L	
5.0PPBCN	**5.0PPBCN**				W	9/26/13						
Reactive Cyanide		PASS	3.910		0.004						mg/L	
10PPBCN	**10PPBCN**				W	9/26/13						
Reactive Cyanide		PASS	9.142		0.009						mg/L	
50PPBCN	**50PPBCN**				W	9/26/13						
Reactive Cyanide		PASS	50.549		0.051						mg/L	
100PPBCN	**100PPBCN**				W	9/26/13						
Reactive Cyanide		PASS	99.909		0.100						mg/L	
250PPBCN	**250PPBCN**				W	9/26/13						
Reactive Cyanide		PASS	253.283		0.253						mg/L	
500PPBCN	**500PPBCN**				W	9/26/13						
Reactive Cyanide		PASS	498.349		0.498						mg/L	
LOW	**LOW**				W	9/26/13						
Reactive Cyanide		PASS	10.195		0.010						mg/L	
HIGH	**HIGH**				W	9/26/13						
Reactive Cyanide		PASS	527.635		0.528						mg/L	
ICV1	**ICV1**				W	9/26/13						
Reactive Cyanide		PASS	96.292		0.10	100.0	85	115			mg/L	
ICB1	**ICB1**				W	9/26/13						
Reactive Cyanide		PASS	0.564		0.001			+/-0.0050			mg/L	
CCV1	**CCV1**				W	9/26/13						
Reactive Cyanide		PASS	242.491		0.24	96.0	90	110			mg/L	
CCB1	**CCB1**				W	9/26/13						
Reactive Cyanide		PASS	0.577		0.001			+/-0.0050			mg/L	
LB67898BLS	**LB67898BLS**				S	9/26/13						
Reactive Cyanide		PASS	0.556		0.006			+/-0.0500			mg/Kg	
LB67898BSS	**LB67898BSS**				S	9/26/13						
Reactive Cyanide		PASS	385.962		3.86	97.0	85.00	115.00			mg/Kg	
E3847-01	**P001-DG-2087-1**			1	S	9/26/13						
Reactive Cyanide		PASS	0.441		0.004						mg/Kg	
E3847-01D	**P001-DG-2087-1D**			1	S	9/26/13						
Reactive Cyanide		PASS	1.420		0.014				0	20	mg/Kg	
E3847-01S	**P001-DG-2087-1S**			1	S	9/26/13						
Reactive Cyanide		PASS	57.173		0.57	143.0	48	158			mg/Kg	
E3847-02	**P001-DW-2058-1**			1	S	9/26/13						
Reactive Cyanide		PASS	0.300		0.003						mg/Kg	
E3847-03	**P001-DW-2059-1**			1	S	9/26/13						
Reactive Cyanide		PASS	34.910		0.349						mg/Kg	

Chemtech Consulting Group

Analytical Review Report

Date Printed : 9/30/13
Analyst : HM
Data File : lb67898.csv
Approved By :
Approved Date : 9/30/13
Worksheet # :

Lab Sample ID / Parameter	Client ID		Raw Amt PPB	Dil / Final Conc	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Reactive Cyanide												
E3847-04	**P001-DW-2060-1**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.043	-0.000							mg/Kg	
E3847-05	**P001-DW-2062-1**			1	S	9/26/13						
Reactive Cyanide		PASS	12.184	0.122							mg/Kg	
E3847-06	**P001-DW-2063-1**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.111	-0.001							mg/Kg	
CCV2	**CCV2**				W	9/26/13						
Reactive Cyanide		PASS	243.340	0.24		96.0	90	110			mg/L	
CCB2	**CCB2**				W	9/26/13						
Reactive Cyanide		PASS	0.601	0.001				+/-0.0050			mg/L	
E3847-07	**P001-DW-2065-1**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.357	-0.004							mg/Kg	
E3847-08	**P001-DW-2067-1**			1	S	9/26/13						
Reactive Cyanide		PASS	0.257	0.003							mg/Kg	
E3847-09	**P001-DW-2073-1**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.445	-0.004							mg/Kg	
E3847-10	**P001-DW-2074-1**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.443	-0.004							mg/Kg	
E3847-11	**P001-DW-2076-1**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.232	-0.002							mg/Kg	
E3847-12	**P001-DW-2086-1**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.492	-0.005							mg/Kg	
E3847-13	**P001-DW-5001-3**			1	S	9/26/13						
Reactive Cyanide		PASS	88.168	0.882							mg/Kg	
E3847-14	**P001-DW-5002-3**			1	S	9/26/13						
Reactive Cyanide		PASS	167.933	1.700							mg/Kg	
E3847-15	**P001-DW-5006-3**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.114	-0.001							mg/Kg	
E3847-16	**P001-DW-5006-4**			1	S	9/26/13						
Reactive Cyanide		PASS	0.017	0.000							mg/Kg	
CCV3	**CCV3**				W	9/26/13						
Reactive Cyanide		PASS	246.300	0.25		100.0	90	110			mg/L	
CCB3	**CCB3**				W	9/26/13						
Reactive Cyanide		PASS	0.511	0.001				+/-0.0050			mg/L	
E3847-17	**P001-DW-5009-3**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.355	-0.004							mg/Kg	
E3847-18	**P001-DW-5013-3**			1	S	9/26/13						
Reactive Cyanide		PASS	0.137	0.001							mg/Kg	
E3847-19	**P001-DW-5023-3**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.298	-0.003							mg/Kg	

Chemtech Consulting Group

Analytical Review Report

Date Printed : 9/30/13
Analyst : HM
Data File : lb67898.csv
Approved By :
Approved Date : 9/30/13
Worksheet # :

Lab Sample ID / Parameter	Client ID		Raw Amt PPB / Final Conc	Dil	Matrix	A. Date / %Rec	Prep Method / LCL	Analysis Method / UCL	RPD	Max RPD	Units	Line 1 / Line 2
Reactive Cyanide												
E3847-20	**P001-DW-5024-3**			1	S	9/26/13						
Reactive Cyanide		PASS	-0.193		-0.002						mg/Kg	
CCV4	**CCV4**				W	9/26/13						
Reactive Cyanide		PASS	246.137		0.25	100.0	90	110			mg/L	
CCB4	**CCB4**				W	9/26/13						
Reactive Cyanide		PASS	-0.321		0.000			+/-0.0050			mg/L	

CHEMTECH **Preparation Log** LB675698 **PB72469**

SOP : M 9012C-Total Amenable & Reactive Cyanide-13

TEMP **Set1:** _____ **Set2:** _____

Balance Check(g): Metal PJ 400

Wt1: 1.00g 1.00g **Wt2:** 10.00g 10.00g **Wt3:** _____

Final Vol: 50mL

Batch# PB72469

Preparation Date: 9-26-13

Preparation Time: 8:46 Am

Time In: 9:30 Am

Time: Out 11:00 Am

Reviewed By: [signature]

Preparation Signature: [signature]

Standared Name	MLS USED	STD REF. # FROM LOG
PBW/PBS	50 mL	W1152
LCSS	~~2.0 mL~~ 4.0 mL	~~WP27067~~ WP26017
Matrix Spike	0.4 mL [signature] 9-26-13	WP27336

Chemical Used	ML/Sample Used	Lot Number
0.25N NaOH	50 mL	WP28340
50% v/v H2SO4	5.0 mL	WP25493
51% w/v MgCL2	2.0 mL	WP28378
Sand	5.00 g	W1268

Date / Time	Received By	Relinquished By	Location
9-26-13 11:30Am	HM	[signature]	WCREF A 2
	Analysis Group	**Digestion Group**	

COMMENTS

CHEMTECH **Preparation Log** **PrepBatch ID :** **PB72469**

Lab Sample ID	Client Sample ID	Matrix	Weight/ Volume	PH	Sulfide	Oxidizing	Comments	Prep Pos

* BL=Blank BS=Blank Spike TB=TCLP Blank

CHEMTECH **Preparation Log** **PrepBatch ID : PB72469**

Lab Sample ID	Client Sample ID	Matrix	Weight/~~Volume~~ g	PH	Sulfide	Oxidizing	Comments	Prep Pos
E3847-01	P001-DG-2087-1	SOIL	5.00	NA	NA	NA		
E3847-01DUP	P001-DG-2087-1DUP	↓	5.00	↓	↓	↓		
E3847-01MS	P001-DG-2087-1MS		5.00				TV = 40 PPB	
E3847-02	P001-DW-2058-1		5.00					
E3847-03	P001-DW-2059-1		5.00					
E3847-04	P001-DW-2060-1		5.00					
E3847-05	P001-DW-2062-1		5.00					
E3847-06	P001-DW-2063-1		5.00					
E3847-07	P001-DW-2065-1		5.00					
E3847-08	P001-DW-2067-1		5.00					
E3847-09	P001-DW-2073-1		5.00					
E3847-10	P001-DW-2074-1		5.00					
E3847-11	P001-DW-2076-1		5.00					
E3847-12	P001-DW-2086-1		5.00					
E3847-13	P001-DW-5001-3		5.00					
E3847-14	P001-DW-5002-3		5.00					
E3847-15	P001-DW-5006-3		5.00					
E3847-16	P001-DW-5006-4		5.00					
E3847-17	P001-DW-5009-3		5.00					
E3847-18	P001-DW-5013-3		5.00					
E3847-19	P001-DW-5023-3		5.02					
E3847-20	P001-DW-5024-3		5.00					
PB72469BL	PB72469BL		5.00					
PB72469BS	PB72469BS	↓	5.00	↓	↓	↓		

*** BL=Blank BS=Blank Spike TB=TCLP Blank**

CHEMTECH **Preparation Log**

PB72469

SOP : M 9010C-Tot/Amenable & Reactive Cyanide-13

TEMP **Set1:** ——— **Set2:** ———

Balance Check(g): Metl PJ 400

Wt1: 1.00g 1.00g **Wt2:** 10.00g 10.00g **Wt3:** ———

Final Vol: 50mL

Batch# PB72469

Preparation Date: 09/26/2013

Preparation Time: 08:46 AM

Time In: 9:30 AM

Time: Out 11:00 AM

Reviewed By: JM

Preparation Signature: Jm

Standared Name	MLS USED	STD REF. # FROM LOG
PBW/PBS	50 mL	W1152
LCSS	~~2.0 mL~~ 4.0mL	~~WP27067~~ WP26017
Matrix Spike	0.4 mL Jm 9-26-13	WP27336

Chemical Used	ML/Sample Used	Lot Number
0.25N NaOH	50 mL	WP28340
50% v/v H2SO4	5.0 mL	WP25493
51% w/v MgCL2	2.0 mL	WP28378
Sand	5.00 g	W1268

Date / Time	Received By	Relinquished By	Location
9-26-13 11:30 AM	HM	Jm	WCREF A2
	Analysis Group	**Digestion Group**	

COMMENTS

CHEMTECH **Preparation Log** **PrepBatch ID :** **PB72469**

Lab Sample ID	Client Sample ID	Matrix	~~Weight/ Volume~~ g	PH	Sulfide	Oxidizing	Comments	Prep Pos
E3847-01	P001-DG-2087-1	SOIL	5.00	NA	N/A	N/A		
E3847-01DUP	P001-DG-2087-1DUP	SOIL	5.00	NA	N/A	N/A		
E3847-01MS	P001-DG-2087-1MS	SOIL	5.00	NA	N/A	N/A	TV = 40 PPB	

* BL=Blank BS=Blank Spike TB=TCLP Blank

CHEMTECH **Preparation Log** **PrepBatch ID : PB72469**

Lab Sample ID	Client Sample ID	Matrix	Weight/Volume	PH	Sulfide	Oxidizing	Comments	Prep Pos
E3847-02	P001-DW-2058-1	SOIL	5.00	NA	N/A	N/A		
E3847-03	P001-DW-2059-1	SOIL	5.00	NA	N/A	N/A		
E3847-04	P001-DW-2060-1	SOIL	5.00	NA	N/A	N/A		
E3847-05	P001-DW-2062-1	SOIL	5.00	NA	N/A	N/A		
E3847-06	P001-DW-2063-1	SOIL	5.00	NA	N/A	N/A		
E3847-07	P001-DW-2065-1	SOIL	5.00	NA	N/A	N/A		
E3847-08	P001-DW-2067-1	SOIL	5.00	NA	N/A	N/A		
E3847-09	P001-DW-2073-1	SOIL	5.00	NA	N/A	N/A		
E3847-10	P001-DW-2074-1	SOIL	5.00	NA	N/A	N/A		
E3847-11	P001-DW-2076-1	SOIL	5.00	NA	N/A	N/A		
E3847-12	P001-DW-2086-1	SOIL	5.00	NA	N/A	N/A		
E3847-13	P001-DW-5001-3	SOIL	5.00	NA	N/A	N/A		
E3847-14	P001-DW-5002-3	SOIL	5.00	NA	N/A	N/A		
E3847-15	P001-DW-5006-3	SOIL	5.00	NA	N/A	N/A		
E3847-16	P001-DW-5006-4	SOIL	5.00	NA	N/A	N/A		
E3847-17	P001-DW-5009-3	SOIL	5.00	NA	N/A	N/A		
E3847-18	P001-DW-5013-3	SOIL	5.00	NA	N/A	N/A		
E3847-19	P001-DW-5023-3	SOIL	5.02	NA	N/A	N/A		
E3847-20	P001-DW-5024-3	SOIL	5.00	NA	N/A	N/A		
PB72469BL	PB72469BL	SOIL	5.00	NA	N/A	N/A		
PB72469BS	PB72469BS	SOIL	5.00	NA	N/A	N/A		

*** BL=Blank BS=Blank Spike TB=TCLP Blank**

CHEMTECH Preparation Log

PB72470

SOP : M 9030B-Soluble - 07

TEMP Set1: — Set2: —

Balance Check(g): Metl PJ 400

Wt1: 1.00g 1.00g Wt2: 10.00g 10.00g Wt3: —

Final Vol: 50 mL

Batch# PB72470

Preparation Date: 9-26-13

Preparation Time: 10:47 AM

Time In: 11:30 AM

Time: Out 1:00 PM

Reviewed By: JM

Preparation Signature: JM

Standared Name	MLS USED	STD REF. # FROM LOG
PBW/PBS	50 mL	W1152
LCSS	1.25 mL	WP27067
Matrix Spike	1.25mL	WP27067

Chemical Used	ML/Sample Used	Lot Number
0.5M ZINC ACETATE	5.0 mL	WP27069
FORMALDEHYDE	2.0 mL	W1722
Sand	5.00 g	W1268

Date / Time	Received By	Relinquished By	Location
	Analysis Group	Digestion Group	

COMMENTS

JM 9-26-13

CHEMTECH Preparation Log PrepBatch ID : PB72470

Lab Sample ID	Client Sample ID	Matrix	Weight/ Volume	PH	Sulfide	Oxidizing	Comments	Prep Pos

* BL=Blank BS=Blank Spike TB=TCLP Blank

CHEMTECH **Preparation Log** **PrepBatch ID : PB72470**

Lab Sample ID	Client Sample ID	Matrix	Weight/~~Volume~~ g	PH	Sulfide	Oxidizing	Comments	Prep Pos
E3847-01	P001-DG-2087-1	SOIL	5.00	NA	NA	NA		
E3847-01DUP	P001-DG-2087-1DUP		5.00					
E3847-01MS	P001-DG-2087-1MS		5.00				TV=25 PPM	
E3847-02	P001-DW-2058-1		5.00					
E3847-03	P001-DW-2059-1		5.00					
E3847-04	P001-DW-2060-1		5.00					
E3847-05	P001-DW-2062-1		5.00					
E3847-06	P001-DW-2063-1		5.00					
E3847-07	P001-DW-2065-1		5.00					
E3847-08	P001-DW-2067-1		5.00					
E3847-09	P001-DW-2073-1		5.00					
E3847-10	P001-DW-2074-1		5.00					
E3847-11	P001-DW-2076-1		5.00					
E3847-12	P001-DW-2086-1		5.00					
E3847-13	P001-DW-5001-3		5.00					
E3847-14	P001-DW-5002-3		5.00					
E3847-15	P001-DW-5006-3		5.00					
E3847-16	P001-DW-5006-4		5.00					
E3847-17	P001-DW-5009-3		5.00					
E3847-18	P001-DW-5013-3		5.00					
E3847-19	P001-DW-5023-3		5.02					
E3847-20	P001-DW-5024-3		5.00					
PB72470BL	PB72470BL		5.00					
PB72470BS	PB72470BS	↓	5.00	↓	↓	↓		

*** BL=Blank BS=Blank Spike TB=TCLP Blank**

CHEMTECH Preparation Log

PB72470

SOP : M 9030B - Sulfide-07

TEMP Set1: ——— Set2: ———

Balance Check(g): Metl PJ 400

Wt1: 1.00g 1.00g Wt2: 10.00g 10.00g Wt3: ———

Final Vol: 50mL

Batch# PB72470

Preparation Date: 09/26/2013

Preparation Time: 10:47 Am

Time In: 11:30 Am

Time: Out 1:00 PM

Reviewed By: pb

Preparation Signature: J m

Standared Name	MLS USED	STD REF. # FROM LOG
PBW/PBS	50 mL	W1152
LCSS	1.25 mL	WP27067
Matrix Spike	1.25mL	WP27067

Chemical Used	ML/Sample Used	Lot Number
0.5M ZINC ACETATE	5.0 mL	WP27069
FORMALDEHYDE	2.0 mL	W1722
Sand	5.00 g	W1268

Date / Time	Received By	Relinquished By	Location
	Analysis Group	Digestion Group	

COMMENTS

J m 9-26-13

CHEMTECH Preparation Log

PrepBatch ID : PB72470

Lab Sample ID	Client Sample ID	Matrix	Weight/ Volume	PH	Sulfide	Oxidizing	Comments	Prep Pos
E3847-01	P001-DG-2087-1	SOIL	5.00	NA	N/A	N/A		
E3847-01DUP	P001-DG-2087-1DUP	SOIL	5.00	NA	N/A	N/A		
E3847-01MS	P001-DG-2087-1MS	SOIL	5.00	NA	N/A	N/A	TV=25 PPM	

* BL=Blank BS=Blank Spike TB=TCLP Blank

CHEMTECH **Preparation Log** **PrepBatch ID : PB72470**

Lab Sample ID	Client Sample ID	Matrix	Weight/ Volume	PH	Sulfide	Oxidizing	Comments	Prep Pos
E3847-02	P001-DW-2058-1	SOIL	5.00	NA	N/A	N/A		
E3847-03	P001-DW-2059-1	SOIL	5.00	NA	N/A	N/A		
E3847-04	P001-DW-2060-1	SOIL	5.00	NA	N/A	N/A		
E3847-05	P001-DW-2062-1	SOIL	5.00	NA	N/A	N/A		
E3847-06	P001-DW-2063-1	SOIL	5.00	NA	N/A	N/A		
E3847-07	P001-DW-2065-1	SOIL	5.00	NA	N/A	N/A		
E3847-08	P001-DW-2067-1	SOIL	5.00	NA	N/A	N/A		
E3847-09	P001-DW-2073-1	SOIL	5.00	NA	N/A	N/A		
E3847-10	P001-DW-2074-1	SOIL	5.00	NA	N/A	N/A		
E3847-11	P001-DW-2076-1	SOIL	5.00	NA	N/A	N/A		
E3847-12	P001-DW-2086-1	SOIL	5.00	NA	N/A	N/A		
E3847-13	P001-DW-5001-3	SOIL	5.00	NA	N/A	N/A		
E3847-14	P001-DW-5002-3	SOIL	5.00	NA	N/A	N/A		
E3847-15	P001-DW-5006-3	SOIL	5.00	NA	N/A	N/A		
E3847-16	P001-DW-5006-4	SOIL	5.00	NA	N/A	N/A		
E3847-17	P001-DW-5009-3	SOIL	5.00	NA	N/A	N/A		
E3847-18	P001-DW-5013-3	SOIL	5.00	NA	N/A	N/A		
E3847-19	P001-DW-5023-3	SOIL	5.02	NA	N/A	N/A		
E3847-20	P001-DW-5024-3	SOIL	5.00	NA	N/A	N/A		
PB72470BL	PB72470BL	SOIL	5.00	NA	N/A	N/A		
PB72470BS	PB72470BS	SOIL	5.00	NA	N/A	N/A		

*** BL=Blank BS=Blank Spike TB=TCLP Blank**

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: PH METER

Daily Analysis Runlog For Sequence/QCBatch ID # LB67886

Review By	apatel	Review On	10/1/2013 8:32:18 AM

STD. NAME	STD REF.#
ICAL Standard	W1812,W1780,W1779
ICV Standard	W1749
CCV Standard	W1657,W1748
ICSA Standard	
CRI Standard	
Chk Standard	

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	CAL	CAL	CAL	09/26/13 08:10		OK
2	CAL	CAL	CAL	09/26/13 08:14		OK
3	CAL	CAL	CAL	09/26/13 08:18		OK
4	ICV1	ICV1	ICV	09/26/13 08:22		OK
5	CCV1	CCV1	CCV	09/26/13 08:26		OK
6	E3847-01	P001-DG-2087-1	SAM	09/26/13 08:30		OK
7	E3847-01D	P001-DG-2087-1D	DUP	09/26/13 08:34		OK
8	E3847-02	P001-DW-2058-1	SAM	09/26/13 08:38		OK
9	E3847-03	P001-DW-2059-1	SAM	09/26/13 08:42		OK
10	E3847-04	P001-DW-2060-1	SAM	09/26/13 08:46		OK
11	E3847-05	P001-DW-2062-1	SAM	09/26/13 08:40		OK
12	E3847-06	P001-DW-2063-1	SAM	09/26/13 08:44		OK
13	E3847-07	P001-DW-2065-1	SAM	09/26/13 08:48		OK
14	E3847-08	P001-DW-2067-1	SAM	09/26/13 08:52		OK
15	E3847-09	P001-DW-2073-1	SAM	09/26/13 08:56		OK
16	CCV2	CCV2	CCV	09/26/13 09:00		OK
17	E3847-10	P001-DW-2074-1	SAM	09/26/13 09:04		OK
18	E3847-10D	P001-DW-2074-1D	DUP	09/26/13 09:08		OK
19	E3847-11	P001-DW-2076-1	SAM	09/26/13 09:12		OK
20	E3847-12	P001-DW-2086-1	SAM	09/26/13 09:16		OK
21	E3847-13	P001-DW-5001-3	SAM	09/26/13 09:20		OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: PH METER

Daily Analysis Runlog For Sequence/QCBatch ID # LB67886

Review By	apatel	Review On	10/1/2013 8:32:18 AM

STD. NAME	STD REF.#
ICAL Standard	W1812,W1780,W1779
ICV Standard	W1749
CCV Standard	W1657,W1748
ICSA Standard	
CRI Standard	
Chk Standard	

22	E3847-14	P001-DW-5002-3	SAM	09/26/13 09:24		OK
23	E3847-15	P001-DW-5006-3	SAM	09/26/13 09:28		OK
24	E3847-16	P001-DW-5006-4	SAM	09/26/13 09:32		OK
25	E3847-17	P001-DW-5009-3	SAM	09/26/13 09:36		OK
26	E3847-18	P001-DW-5013-3	SAM	09/26/13 09:40		OK
27	CCV3	CCV3	CCV	09/26/13 09:44		OK
28	E3847-19	P001-DW-5023-3	SAM	09/26/13 09:48		OK
29	E3847-19D	P001-DW-5023-3D	DUP	09/26/13 09:52		OK
30	E3847-20	P001-DW-5024-3	SAM	09/26/13 09:56		OK
31	E3848-01	P001-DW-5027-3	SAM	09/26/13 10:00		OK
32	E3848-02	P001-DW-5029-3	SAM	09/26/13 10:04		OK
33	E3848-03	P001-DW-6006-3	SAM	09/26/13 10:08		OK
34	E3848-04	P001-DW-6009-3	SAM	09/26/13 10:12		OK
35	E3848-05	P001-DW-6010-3	SAM	09/26/13 10:16		OK
36	E3848-06	P001-DW-6011-3	SAM	09/26/13 10:20		OK
37	E3848-07	P001-DW-6017-3	SAM	09/26/13 10:24		OK
38	CCV4	CCV4	CCV	09/26/13 10:28		OK
39	E3848-08	P001-DW-6018-3	SAM	09/26/13 10:32		OK
40	E3848-08D	P001-DW-6018-3D	DUP	09/26/13 10:36		OK
41	E3848-09	P001-DW-6021-3	SAM	09/26/13 10:40		OK
42	E3848-10	P001-DW-6024-3	SAM	09/26/13 10:44		OK
43	CCV5	CCV5	CCV	09/26/13 10:48		OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: TITRAMETRIC

Daily Analysis Runlog For Sequence/QCBatch ID # LB67887

Review By	AHPatel	Review On	10/2/2013 2:30:59 AM

STD. NAME	STD REF.#
ICAL Standard	
ICV Standard	
CCV Standard	
ICSA Standard	
CRI Standard	
Chk Standard	W1700,W1756,W1805

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	LB67887BLS	LB67887BLS	MB	09/26/13 13:15		OK
2	LB67887BSS	LB67887BSS	LCS	09/26/13 13:15		OK
3	E3847-01	P001-DG-2087-1	SAM	09/26/13 13:15		OK
4	E3847-01D	P001-DG-2087-1D	DUP	09/26/13 13:15		OK
5	E3847-01S	P001-DG-2087-1S	MS	09/26/13 13:15		OK
6	E3847-02	P001-DW-2058-1	SAM	09/26/13 13:15		OK
7	E3847-03	P001-DW-2059-1	SAM	09/26/13 13:15		OK
8	E3847-04	P001-DW-2060-1	SAM	09/26/13 13:15		OK
9	E3847-05	P001-DW-2062-1	SAM	09/26/13 13:15		OK
10	E3847-06	P001-DW-2063-1	SAM	09/26/13 13:15		OK
11	E3847-07	P001-DW-2065-1	SAM	09/26/13 13:15		OK
12	E3847-08	P001-DW-2067-1	SAM	09/26/13 13:15		OK
13	E3847-09	P001-DW-2073-1	SAM	09/26/13 13:15		OK
14	E3847-10	P001-DW-2074-1	SAM	09/26/13 13:15		OK
15	E3847-11	P001-DW-2076-1	SAM	09/26/13 13:15		OK
16	E3847-12	P001-DW-2086-1	SAM	09/26/13 13:15		OK
17	E3847-13	P001-DW-5001-3	SAM	09/26/13 13:15		OK
18	E3847-14	P001-DW-5002-3	SAM	09/26/13 13:15		OK
19	E3847-15	P001-DW-5006-3	SAM	09/26/13 13:15		OK
20	E3847-16	P001-DW-5006-4	SAM	09/26/13 13:15		OK
21	E3847-17	P001-DW-5009-3	SAM	09/26/13 13:15		OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: TITRAMETRIC

Daily Analysis Runlog For Sequence/QCBatch ID # LB67887

Review By	AHPatel	Review On	10/2/2013 2:30:59 AM

STD. NAME	STD REF.#
ICAL Standard	
ICV Standard	
CCV Standard	
ICSA Standard	
CRI Standard	
Chk Standard	W1700,W1756,W1805

22	E3847-18	P001-DW-5013-3	SAM	09/26/13 13:15		OK
23	E3847-19	P001-DW-5023-3	SAM	09/26/13 13:15		OK
24	E3847-20	P001-DW-5024-3	SAM	09/26/13 13:15		OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: GRAVIMETRIC

Daily Analysis Runlog For Sequence/QCBatch ID # LB67889

Review By	apatel	Review On	10/1/2013 8:32:27 AM

STD. NAME	STD REF.#
ICAL Standard	
ICV Standard	W1585
CCV Standard	
ICSA Standard	
CRI Standard	
Chk Standard	

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	ICV1	ICV1	ICV	09/26/13 11:00		OK
2	E3847-02	P001-DW-2058-1	SAM	09/26/13 11:00		OK
3	E3847-02D	P001-DW-2058-1D	DUP	09/26/13 11:00		OK
4	E3847-03	P001-DW-2059-1	SAM	09/26/13 11:00		OK
5	E3847-04	P001-DW-2060-1	SAM	09/26/13 11:00		OK
6	E3847-05	P001-DW-2062-1	SAM	09/26/13 11:00		OK
7	E3847-06	P001-DW-2063-1	SAM	09/26/13 11:00		OK
8	E3847-07	P001-DW-2065-1	SAM	09/26/13 11:00		OK
9	E3847-08	P001-DW-2067-1	SAM	09/26/13 11:00		OK
10	E3847-09	P001-DW-2073-1	SAM	09/26/13 11:00		OK
11	E3847-10	P001-DW-2074-1	SAM	09/26/13 11:00		OK
12	E3847-11	P001-DW-2076-1	SAM	09/26/13 11:00		OK
13	E3847-12	P001-DW-2086-1	SAM	09/26/13 11:00		OK
14	E3847-13	P001-DW-5001-3	SAM	09/26/13 11:00		OK
15	E3847-14	P001-DW-5002-3	SAM	09/26/13 11:00		OK
16	E3847-15	P001-DW-5006-3	SAM	09/26/13 11:00		OK
17	E3847-16	P001-DW-5006-4	SAM	09/26/13 11:00		OK
18	E3847-17	P001-DW-5009-3	SAM	09/26/13 11:00		OK
19	E3847-18	P001-DW-5013-3	SAM	09/26/13 11:00		OK
20	E3847-20	P001-DW-5024-3	SAM	09/26/13 11:00		OK
21	E3848-01	P001-DW-5027-3	SAM	09/26/13 11:00		OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: GRAVIMETRIC

Daily Analysis Runlog For Sequence/QCBatch ID # LB67889

Review By	apatel	Review On	10/1/2013 8:32:27 AM

STD. NAME	STD REF.#
ICAL Standard	
ICV Standard	W1585
CCV Standard	
ICSA Standard	
CRI Standard	
Chk Standard	

22	E3848-01D	P001-DW-5027-3D	DUP	09/26/13 11:00		OK
23	E3848-02	P001-DW-5029-3	SAM	09/26/13 11:00		OK
24	E3848-03	P001-DW-6006-3	SAM	09/26/13 11:00		OK
25	E3848-04	P001-DW-6009-3	SAM	09/26/13 11:00		OK
26	E3848-05	P001-DW-6010-3	SAM	09/26/13 11:00		OK
27	E3848-07	P001-DW-6017-3	SAM	09/26/13 11:00		OK
28	E3848-08	P001-DW-6018-3	SAM	09/26/13 11:00		OK
29	E3848-09	P001-DW-6021-3	SAM	09/26/13 11:00		OK
30	E3848-10	P001-DW-6024-3	SAM	09/26/13 11:00		OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: GRAVIMETRIC

Daily Analysis Runlog For Sequence/QCBatch ID # LB67891

Review By	apatel	Review On	10/1/2013 8:32:43 AM

STD. NAME	STD REF.#
ICAL Standard	
ICV Standard	
CCV Standard	
ICSA Standard	
CRI Standard	
Chk Standard	

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	E3847-01	P001-DG-2087-1	SAM	09/26/13 09:00		OK
2	E3847-01D	P001-DG-2087-1D	DUP	09/26/13 09:00		OK
3	E3847-19	P001-DW-5023-3	SAM	09/26/13 09:00		OK
4	E3848-06	P001-DW-6011-3	SAM	09/26/13 09:00		OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: KONELAB 20

Daily Analysis Runlog For Sequence/QCBatch ID # LB67898

Review By heta Review On 10/1/2013 9:23:24 AM

STD. NAME	STD REF.#
ICAL Standard	WP28889,WP28890,WP28891,WP28892,WP28893,WP28894,WP28895
ICV Standard	WP28897
CCV Standard	WP28896
ICSA Standard	
CRI Standard	
Chk Standard	WP25452,WP25453,WP28887

Sr#	SampleId	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL	09/26/13 09:23		OK
2	5.0PPBCN	5.0PPBCN	CAL	09/26/13 09:23		OK
3	10PPBCN	10PPBCN	CAL	09/26/13 09:23		OK
4	50PPBCN	50PPBCN	CAL	09/26/13 09:23		OK
5	100PPBCN	100PPBCN	CAL	09/26/13 09:23		OK
6	250PPBCN	250PPBCN	CAL	09/26/13 09:23		OK
7	500PPBCN	500PPBCN	CAL	09/26/13 09:23		OK
8	LOW	LOW	LDS	09/26/13 09:42		OK
9	HIGH	HIGH	HDS	09/26/13 09:42		OK
10	ICV1	ICV1	ICV	09/26/13 16:50		OK
11	ICB1	ICB1	ICB	09/26/13 16:50		OK
12	CCV1	CCV1	CCV	09/26/13 16:50		OK
13	CCB1	CCB1	CCB	09/26/13 16:50		OK
14	LB67898BLS	LB67898BLS	MB	09/26/13 16:50		OK
15	LB67898BSS	LB67898BSS	LCS	09/26/13 16:50		Not Ok
16	E3847-01	P001-DG-2087-1	SAM	09/26/13 16:50		OK
17	E3847-01D	P001-DG-2087-1D	DUP	09/26/13 16:50		OK
18	E3847-01S	P001-DG-2087-1S	MS	09/26/13 16:50		OK
19	E3847-02	P001-DW-2058-1	SAM	09/26/13 16:50		OK
20	E3847-03	P001-DW-2059-1	SAM	09/26/13 16:50		OK
21	E3847-04	P001-DW-2060-1	SAM	09/26/13 16:57		OK

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Instrument ID: KONELAB 20

Daily Analysis Runlog For Sequence/QCBatch ID # LB67898

Review By	heta	Review On	10/1/2013 9:23:24 AM

STD. NAME	STD REF.#
ICAL Standard	WP28889,WP28890,WP28891,WP28892,WP28893,WP28894,WP28895
ICV Standard	WP28897
CCV Standard	WP28896
ICSA Standard	
CRI Standard	
Chk Standard	WP25452,WP25453,WP28887

22	E3847-05	P001-DW-2062-1	SAM	09/26/13 16:57		OK
23	E3847-06	P001-DW-2063-1	SAM	09/26/13 16:57		OK
24	CCV2	CCV2	CCV	09/26/13 16:57		OK
25	CCB2	CCB2	CCB	09/26/13 16:58		OK
26	E3847-07	P001-DW-2065-1	SAM	09/26/13 16:58		OK
27	E3847-08	P001-DW-2067-1	SAM	09/26/13 16:58		OK
28	E3847-09	P001-DW-2073-1	SAM	09/26/13 16:58		OK
29	E3847-10	P001-DW-2074-1	SAM	09/26/13 16:58		OK
30	E3847-11	P001-DW-2076-1	SAM	09/26/13 16:58		OK
31	E3847-12	P001-DW-2086-1	SAM	09/26/13 16:58		OK
32	E3847-13	P001-DW-5001-3	SAM	09/26/13 17:05		OK
33	E3847-14	P001-DW-5002-3	SAM	09/26/13 17:05		OK
34	E3847-15	P001-DW-5006-3	SAM	09/26/13 17:05		OK
35	E3847-15	P001-DW-5006-3	SAM	09/26/13 17:05		OK
36	CCV3	CCV3	CCV	09/26/13 17:05		OK
37	CCB3	CCB3	CCB	09/26/13 17:05		OK
38	E3847-17	P001-DW-5009-3	SAM	09/26/13 17:05		OK
39	E3847-18	P001-DW-5013-3	SAM	09/26/13 17:05		OK
40	E3847-19	P001-DW-5023-3	SAM	09/26/13 17:05		OK
41	E3847-20	P001-DW-5024-3	SAM	09/26/13 17:05		OK
42	CCV4	CCV4	CCV	09/26/13 17:05		OK
43	CCB4	CCB4	CCB	09/26/13 17:08		OK
44	E3847-16	P001-DW-5006-4	SAM	09/26/13 17:05		OK

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Prep Standard - Chemical Standard Summary

Order ID : E3847

Test : Corrosivity,Flash Point,Ignitability,Reactive Cyanide,Reactive Sulfide

Prepbatch ID : PB72469,PB72470,

Sequence ID/Qc Batch ID: lb67886,lb67887,LB67889,lb67891,LB67898,

Standard ID :
WP24646,WP25452,WP25453,WP25493,WP26017,WP27067,WP27069,WP27189,WP27336,WP28340,WP28378,WP28887,WP28888,WP28889,WP28890,WP28891,WP28892,WP28893,WP28894,WP28895,WP28896,WP28897,WP28900,

Chemical ID :
W1031,W1059,W1096,W1098,W1120,W1152,W1209,W1210,W1268,W1339,W1585,W1618,W1657,W1692,W1700,W1722,W1748,W1749,W1752,W1756,W1779,W1780,W1785,W1789,W1805,W1812,

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
11	Sodium hydroxide absorbing solution 0.25 N	WP24646	03/07/2013	09/07/2013	roberto

FROM 21.000L of W1152(DI Water) + 210.000gram of W1618(Sodium Hydroxide Pellets 12 Kg) = Final Quantity: 21.000 L

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
539	CN BUFFER	WP25452	04/11/2013	10/11/2013	heta

FROM 138.000gram of W1059(SODIUM PHOSPHATE, MONOBAS/HYD, CRYS, ACS, 2.5 KG) + 862.000ml of W1152(DI Water) = Final Quantity: 1000.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
607	PYRIDINE-BARBITURIC ACID	WP25453	04/11/2013	10/11/2013	heta

FROM 145.000ml of W1152(DI Water) + 15.000gram of W1210(Barbituric Acid, 100 gms) + 15.000ml of W1096(Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)) + 75.000ml of W1209(Pyridine, 4L) = Final Quantity: 250.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2046	SULFURIC ACID 1:1	WP25493	04/15/2013	10/15/2013	jim

FROM 500.000ml of W1152(DI Water) + 500.000ml of W1692(Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)) = Final Quantity: 1000.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1749	Reactive Cyanide Spike solution, 5PPM	WP26017	05/09/2013	09/30/2013	jim

FROM 5.000ml of W1789(CYANIDE STD 1000PPM 4OZ) + 995.000ml of WP24646(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 1000.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
143	Reactive sulfide stock std. 1000 ppm	WP27067	07/03/2013	01/03/2014	jim

FROM 0.993L of W1152(DI Water) + 7.500gram of W1031(Sodium Sulfide, 500 g) = Final Quantity: 1.000 L

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
160	0.5M ZINC ACETATE	WP27069	07/03/2013	01/03/2014	jim

FROM 0.889L of W1152(DI Water) + 1.000ml of W1098(Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)) + 110.000gram of W1752(ZINC ACETATE,DIHYD,CRYS,ACS,500G) = Final Quantity: 1000.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
11	Sodium hydroxide absorbing solution 0.25 N	WP27189	07/10/2013	01/10/2014	roberto

FROM 21.000L of W1152(DI Water) + 210.000gram of W1618(Sodium Hydroxide Pellets 12 Kg) = Final Quantity: 21.000 L

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
294	Working Std for CN Spike (5 ppm)	WP27336	07/17/2013	09/30/2013	roberto

FROM 5.000ml of W1785(CYANIDE STD 1000PPM 4OZ) + 995.000ml of WP27189(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 1000.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
11	Sodium hydroxide absorbing solution 0.25 N	WP28340	09/03/2013	03/03/2014	roberto

FROM 21.000L of W1152(DI Water) + 210.000gram of W1618(Sodium Hydroxide Pellets 12 Kg) = Final Quantity: 21.000 L

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1768	Magnesium chloride solution, 51% (w/v)	WP28378	09/04/2013	03/04/2014	jim

FROM 490.000ml of W1152(DI Water) + 510.000gram of W1339(MAGNESIUM CHLORIDE, 6-HYD, CRYS, 12KG) = Final Quantity: 1000.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
10	Chloramine T solution	WP28887	09/26/2013	09/27/2013	heta

FROM 1.000gram of W1120(CHLORAMINE-T BAKER 250GM) + 99.000ml of W1152(DI Water) = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
3	Standard Cyanide Working Solution 5 ppm	WP28888	09/26/2013	09/27/2013	heta

FROM 0.500ml of W1785(CYANIDE STD 1000PPM 4OZ) + 99.500ml of WP28340(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
4	Calibation standard 500 ppb	WP28889	09/26/2013	09/27/2013	heta

FROM 10.000ml of WP28888(Standard Cyanide Working Solution 5 ppm) + 90.000ml of WP28340(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 100.000 ml

STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
5	Calibration Standard 250 ppb	WP28890	09/26/2013	09/27/2013	heta

FROM 5.000ml of WP28888(Standard Cyanide Working Solution 5 ppm) + 95.000ml of WP28340(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
6	Calibration Standard 100 ppb	WP28891	09/26/2013	09/27/2013	heta

FROM 2.000ml of WP28888(Standard Cyanide Working Solution 5 ppm) + 98.000ml of WP28340(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
7	Calibration Standard 50 ppb	WP28892	09/26/2013	09/27/2013	heta

FROM 1.000ml of WP28888(Standard Cyanide Working Solution 5 ppm) + 99.000ml of WP28340(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
8	Calibration Standard 10 ppb	WP28893	09/26/2013	09/27/2013	heta

FROM 2.000ml of WP28889(Calibation standard 500 ppb) + 98.000ml of WP28340(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
9	Calibration Standard 5 ppb	WP28894	09/26/2013	09/27/2013	heta

FROM 1.000ml of WP28889(Calibation standard 500 ppb) + 99.000ml of WP28340(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
167	0 ppb CN calibration std	WP28895	09/26/2013	09/27/2013	heta

FROM 100.000ml of WP28340(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
1593	CN CCV std, 250PPB	WP28896	09/26/2013	09/27/2013	heta

FROM 5.000ml of WP28888(Standard Cyanide Working Solution 5 ppm) + 95.000ml of WP28340(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 100.000 ml

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
2168	RCN ICV STD, 100 PPB	WP28897	09/26/2013	09/27/2013	heta

FROM 2.000ml of WP26017(Reactive Cyanide Spike solution, 5PPM) + 98.000ml of WP28340(Sodium hydroxide absorbing solution 0.25 N) = Final Quantity: 100.000 ml

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STANDARD PREPARATION LOG

RecipeID	NAME	NO.	Prep Date	Expiration D	Prepared By
146	Reactive sulfide LCS std.	WP28900	09/26/2013	09/27/2013	jim

FROM 48.750ml of W1152(DI Water) + 1.250ml of WP27067(Reactive sulfide stock std. 1000 ppm) = Final Quantity: 50.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3910-1 / Sodium Sulfide, 500 g	H23586	10/02/2019	10/02/2009 /	10/02/2009 / jmoore	W1031

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3818-5 / SODIUM PHOSPHATE, MONOBAS/HYD, CRYS, ACS, 2.5 KG	H29154	01/30/2020	03/03/2010 /	01/08/2010 / jmoore	W1059

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	h04040	11/24/2019	03/03/2010 /	11/25/2009 / jmoore	W1096

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	h04040	11/24/2019	04/23/2010 / jmoore	11/25/2009 / jmoore	W1098

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	JTE494-6 / CHLORAMINE-T BAKER 250GM	h23602	12/14/2019	03/03/2010 /	12/15/2009 / jmoore	W1120

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	Lab certified	02/23/2015	02/23/2010 /	02/23/2010 / divya	W1152

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J9393-3 / Pyridine, 4L	L15470	05/31/2018	05/30/2008 / jmoore	05/30/2008 / jmoore	W1209

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EM-BX0035-3 / Barbituric Acid, 100 gms	Y32603	10/28/2023	10/27/2003 / jmoore	10/27/2003 / jmoore	W1210

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3382-05 / Sand, Purified (cs/4x2.5kg)	H36602	05/26/2020	08/18/2010 / jmoore	05/25/2010 / jmoore	W1268

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1.05832.9012 / MAGNESIUM CHLORIDE, 6-HYD, CRYS, 12KG	a0031132	07/21/2020	07/21/2010 / jmoore	07/20/2010 / jmoore	W1339

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EMD Chemicals Inc.	xx0045-3 / p-xylene	50225035	09/28/2016	09/18/2012 / jim	09/28/2011 / apatel	W1585

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19510-7 / Sodium Hydroxide Pellets 12 Kg	PB002849SP	12/20/2016	01/07/2013 / jim	12/20/2011 / apatel	W1618

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL13850-1 / Buffer Solution, PH2 (500ml)	2203102	02/28/2014	05/01/2012 / jim	04/10/2012 / apatel	W1657

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	K43061	06/06/2017	12/26/2012 / roberto	06/06/2012 / apatel	W1692

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL69870-8 / SODIUM THIOSULFATE,0.025N,4LITRE	2203415	09/30/2013	07/08/2013 / apatel	06/08/2012 / apatel	W1700

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EMD-FX0410-5 / FORMALDEHYDE SOLUTION 450ML	52062	08/23/2017	08/01/2013 / jim	08/23/2012 / apatel	W1722

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14940-1 / Buffer Solution, PH12 (500ml)	2210864	10/31/2013	12/13/2012 / jim	12/10/2012 / apatel	W1748

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	566002 / BUFFER PH 7.00 GREEN 1PINT PK6	2205272	04/30/2014	01/02/2013 / jim	12/10/2012 / apatel	W1749

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J4296-1 / ZINC ACETATE,DIHYD,CRYS,ACS,500G	0000020964	08/22/2017	06/24/2013 / jim	12/27/2012 / apatel	W1752

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL35830-4 / IODINE SOLUTION .025N 1L	2301004	12/31/2013	05/01/2013 / jim	01/08/2013 / apatel	W1756

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1601-1 / PH 10.01 BUFFER,COLOR CD 475ML	2301099	06/30/2014	04/30/2013 /	04/05/2013 / apatel	W1779

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14455-3 / buffer solution pH 7 yellow	2301297	12/31/2014	06/03/2013 / jim	04/05/2013 / apatel	W1780

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	RC2543-4 / CYANIDE STD 1000PPM 4OZ	2303D97	09/30/2013	04/30/2013 / apatel	04/24/2013 / apatel	W1785

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	RC2543-4 / CYANIDE STD 1000PPM 4OZ	4303B10	09/30/2013	05/06/2013 / apatel	05/06/2013 / apatel	W1789

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL70850-8 / Starch Solution, 4L	2306598	05/31/2015	07/03/2013 / roberto	06/20/2013 / apatel	W1805

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14055-3 / PH 4 BUFFER SOLUTION	2303957	03/31/2015	08/20/2013 / jim	08/08/2013 / apatel	W1812

100 Matsonford Road
Suite 200
Radnor, PA 19087
phone: 1-800-932-5000

Certificate of Analysis

Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)

Lot Number: 2205272 Product Number: BDH0194 Expiration Date: APR 2014 Manufacture Date:5/11/2012

The certified value for this product is confirmed in independent testing by a second qualified chemist.

Contains:

Name	CAS#	Grade
Inert Dye	Proprietary	Commercial Grade
Potassium Phosphate, Monobasic	7778-77-0	ACS
Preservative (No Mercury compounds or Formaldehyde)	Proprietary	Commercial Grade
Sodium Phosphate, Dibasic	7558-79-4	ACS
Water, Deionized	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Clear, yellow, odorless	Passed Test
pH at 25 °C (traceable to NIST SRM 186 & 191)	pH determination	7.00 ± 0.01 pH at 25.0 °C	7.01 pH at 25.0 °C

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Shelf Life (unopened container):

Part Number	Shelf Life
BDH0194-20L	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

LaNelle Ohlhausen
Quality Assurance

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

To determine manufacture site using lot number, visit http://www.riccachemical.com/Documents/lot.pdf.

Version: 0

RICCA CHEMICAL COMPANY

Arlington, TX 76012
Pocomoke City, MD 21851
Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Iodine (Iodine-Iodide), 0.0250 Normal (N/40), 1 mL = 0.4008 mg S2-

Lot Number: 2301004 Product Number: 3975 Expiration Date: DEC 2013 Manufacture Date:1/2/2013

Contains:

Name	CAS#	Grade
Iodine, I2	7553-56-2	ACS
Potassium Iodide, KI	7681-11-0	ACS
Water, Deionized, H2O	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Clear, brown, Iodine odor	Passed Test
Assay at 20 °C (traceable to NIST SRM 136)	Titrimetric vs. Sodium Thiosulfate (Starch Indicator)	0.02500 ± 0.00002 N at 20.0 °C	0.02502 N at 20.0 °C

Specification	Reference	Method Number
Standard Iodine Solution, 0.0250 N	APHA	4500-S2- F
Iodine Solution (approximately 0.025 N)	EPA (SW-846)	9031
Standard Iodine Solution, 0.0250 N	EPA	376.1
Iodine Solution (approximately 0.025 N)	EPA (SW-846)	9034

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Shelf Life (unopened container):

Part Number	Shelf Life
3975-32	12 months
3975-1	12 months
3975-16	12 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

LaNelle Ohlhausen
Quality Assurance

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

To determine manufacture site using lot number, visit http://www.riccachemical.com/Documents/lot.pdf.

Version: 1

RICCA CHEMICAL COMPANY

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Batesville, IN 47006
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customerservice@riccachemical.com

Certificate of Analysis

Buffer, Reference Standard, pH 10.00 ± 0.01 at 25°C (Color Coded Blue)

Lot Number: 2301099 Product Number: 1601 Expiration Date: JUN 2014 Manufacture Date:1/8/2013

The certified value for this product is confirmed in independent testing by a second qualified chemist.
The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.
pH 10.31 (0 °C), pH 10.23 (5 °C), pH 10.17 (10 °C), 10.11 (15 °C), 10.05 (20 °C), 9.95 (30 °C), 9.91 (35 °C), 9.87 (40 °C), 9.81 (50 °C)

Contains:

Name	CAS#	Grade
Inert Dye	Proprietary	Commercial Grade
Preservative (No Mercury compounds or Formaldehyde)	Proprietary	Commercial Grade
Sodium Bicarbonate, NaHCO3	144-55-8	ACS
Sodium Carbonate, Na2CO3	497-19-8	ACS
Water, Deionized, H2O	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Clear, blue, odorless	Passed Test
pH at 25 °C (traceable to NIST SRM 186 & 191)	pH determination	10.000 ± 0.010 pH at 25.0 °C	10.006 pH at 25.0 °C

Specification	Reference	Method Number
Commercial Buffer Solutions	ASTM	D 1293 B
Buffer C	ASTM	D 5464
Buffer C	ASTM	D 5128

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Shelf Life (unopened container):

Part Number	Shelf Life
1601-2.5	18 months
1601-4	18 months
1601-32CS	18 months
1601-16CS	18 months
1601-32	18 months
1601-20B	18 months
1601-5	18 months
1601-20	18 months
1601-1	18 months
1601-1CT	18 months
1601-1CS	18 months
1601-16	18 months
1601-55	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

Version: 4

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100 Matsonford Road
Suite 200
Radnor, PA 19087
phone: 1-800-932-5000

Certificate of Analysis

Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)

Lot Number: 2301297 Product Number: BDH0194 Expiration Date: DEC 2014 Manufacture Date:1/11/2013

The certified value for this product is confirmed in independent testing by a second qualified chemist.

Contains:

Name	CAS#	Grade
Inert Dye	Proprietary	Commercial Grade
Potassium Phosphate, Monobasic	7778-77-0	ACS
Preservative (No Mercury compounds or Formaldehyde)	Proprietary	Commercial Grade
Sodium Phosphate, Dibasic	7558-79-4	ACS
Water, Deionized	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Clear, yellow, odorless	Passed Test
pH at 25 °C (traceable to NIST SRM 186 & 191)	pH determination	7.00 ± 0.01 pH at 25.0 °C	7.00 pH at 25.0 °C

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Shelf Life (unopened container):

Part Number	Shelf Life
BDH0194-20L	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

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Quality Assurance

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To determine manufacture site using lot number, visit http://www.riccachemical.com/Documents/lot.pdf.

Version: 0

100 Matsonford Road
Suite 200
Radnor, PA 19087
phone: 1-800-932-5000

Certificate of Analysis

Buffer, Reference Standard, pH 4.00 ± 0.01 at 25°C (Color Coded Red)

Lot Number: 2303957 Product Number: BDH0198 Expiration Date: MAR 2015 Manufacture Date:3/18/2013

The certified value for this product is confirmed in independent testing by a second qualified chemist.

Contains:

Name	CAS#	Grade
Inert Dye	Proprietary	Commercial Grade
Potassium Acid Phthalate	877-24-7	Buffer or ACS
Preservative (No Mercury compounds or Formaldehyde)	Proprietary	Commercial Grade
Water, Deionized	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Clear, light red, odorless	Passed Test
pH at 25 °C (traceable to NIST SRM 185 & 186)	pH determination	4.00 ± 0.01 pH at 25.0 °C	3.99 pH at 25.0 °C

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Shelf Life (unopened container):

Part Number	Shelf Life
BDH0198-20L	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

LaNelle Ohlhausen
Quality Assurance

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Version: 0

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http://www.riccachemical.com
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Certificate of Analysis

Cyanide Standard, 1 mL = 1 mg CN, 1000 ppm CN

Lot Number: 2303D97 Product Number: 2543 Expiration Date: SEP 2013 Manufacture Date:3/29/2013

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.
Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard.
Restandardize weekly if extreme accuracy is required.

Contains:

Name	CAS#	Grade
Potassium Cyanide, KCN	151-50-8	ACS
Sodium Hydroxide, NaOH	1310-73-2	ACS
Water, Deionized, H2O	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Clear, colorless, cyanide odor	Passed Test
Certified Concentration	Based on accurate volumetric preparation	1000 ± 5 ppm CN-	1000 ppm CN-

Specification	Reference	Method Number
Stock Standard Cyanide Solution	APHA	4500-CN- F
Stock Cyanide Solution	APHA	4500-CN- E
Stock Cyanide Solution	APHA	4500-CN- K
Stock Cyanide Solution	APHA	4500-CN- H
Cyanide Reference Solution (1000 mg/L)	EPA (SW-846)	7.3.3.2
Cyanide Calibration Stock Solution (1,000 mg/L CN-)	EPA (SW-846)	9213
Stock Cyanide Solution	EPA	335.3
Stock Cyanide Solution	EPA	335.2
Cyanide Solution Stock	ASTM	D 4282
Simple Cyanide Solution, Stock (1.0 g/L CN)	ASTM	D 4374

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Shelf Life (unopened container):

Part Number	Shelf Life
2543-4	6 months
2543-32	6 months
2543-16	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

LaNelle Ohlhausen
Quality Assurance

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Version: 2

To determine manufacture site using lot number, visit http://www.riccachemical.com/Documents/lot.pdf.

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Certificate of Analysis

Starch Indicator, 0.5% (w/v) Aqueous Solution, Mercury Free, for Iodometric Titrations

Lot Number: 2306598 Product Number: 8000 Expiration Date: MAY 2015 Manufacture Date:6/6/2013

This product is Mercury-free.

Contains:

Name	CAS#	Grade
Salicylic acid, C7H6O3	69-72-7	ACS
Starch, soluble, (C6H10O5)n	9005-84-9	ACS
Water, Deionized, H2O	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Translucent, odorless	Passed Test
Suitability for Use	Characteristic Check	Colorless (Iodine absent) - Blue (Iodine present)	Passed Test

Specification	Reference	Method Number
Starch Solution	APHA	4500-S2- F
Starch Indicator Solution	APHA	4500-Cl B
Starch Indicator	APHA	4500-SO32- B
Starch indicator solution	APHA	2350 B
Starch indicator solution	APHA	2350 E
Starch Solution	APHA	510 B
Starch Solution	APHA	5530 C
Starch Indicator	APHA	4500-Cl C
Starch Indicator	EPA	345.1

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Shelf Life (unopened container):

Part Number	Shelf Life
8000-2.5	24 months
8000-32	24 months
8000-5	24 months
8000-1	24 months
8000-16	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

LaNelle Ohlhausen
Quality Assurance

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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Version: 1

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Certificate of Analysis

Cyanide Standard, 1 mL = 1 mg CN, 1000 ppm CN

Lot Number: 4303B10 Product Number: 2543 Expiration Date: SEP 2013 Manufacture Date:3/29/2013

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.
Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard.
Restandardize weekly if extreme accuracy is required.

Contains:

Name	CAS#	Grade
Potassium Cyanide, KCN	151-50-8	ACS
Sodium Hydroxide, NaOH	1310-73-2	ACS
Water, Deionized, H2O	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Clear, colorless, cyanide odor	Passed Test
Certified Concentration	Based on accurate volumetric preparation	1000 ± 5 ppm CN-	1000 ppm CN-

Specification	Reference	Method Number
Stock Standard Cyanide Solution	APHA	4500-CN- F
Stock Cyanide Solution	APHA	4500-CN- E
Stock Cyanide Solution	APHA	4500-CN- K
Stock Cyanide Solution	APHA	4500-CN- H
Cyanide Reference Solution (1000 mg/L)	EPA (SW-846)	7.3.3.2
Cyanide Calibration Stock Solution (1,000 mg/L CN-)	EPA (SW-846)	9213
Stock Cyanide Solution	EPA	335.3
Stock Cyanide Solution	EPA	335.2
Cyanide Solution Stock	ASTM	D 4282
Simple Cyanide Solution, Stock (1.0 g/L CN)	ASTM	D 4374

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Shelf Life (unopened container):

Part Number	Shelf Life
2543-4	6 months
2543-32	6 months
2543-16	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

LaNelle Ohlhausen
Quality Assurance

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

Version: 2

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W1248
BB 12/10/12

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http://www.riccachemical.com
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Certificate of Analysis

Buffer, Reference Standard, pH 12.00 ± 0.01 at 25°C

Lot Number: 2210864 Product Number: 1615 Expiration Date: OCT 2013 Manufacture Date:11/2/2012

The certified value for this product is confirmed in independent testing by a second qualified chemist.

Contains:

Name	CAS#	Grade
Potassium Chloride, KCl	7447-40-7	ACS
Sodium Hydroxide, NaOH	1310-73-2	ACS
Water, Deionized, H2O	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Clear, colorless, odorless	Passed Test
pH at 25 °C (traceable to NIST SRM 186 & 191)	pH determination	12.000 ± 0.010 pH at 25.0 °C	12.000 pH at 25.0 °C

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Shelf Life (unopened container):

Part Number	Shelf Life
1615-2.5	12 months
1615-32	12 months
1615-20B	12 months
1615-5	12 months
1615-1	12 months
1615-1CT	12 months
1615-16	12 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

LaNelle Ohlhausen
Quality Assurance

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Version: 1

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customerservice@riccachemical.com

Certificate of Analysis

Buffer, Reference Standard, pH 2.00 ± 0.01 at 25°C

Lot Number: 2203102 Product Number: 1493 Expiration Date: FEB 2014 Manufacture Date:3/6/2012

The certified value for this product is confirmed in independent testing by a second qualified chemist.
The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.
pH 1.93 (10 °C), 1.98 (15 °C), 1.98 (20 °C), 2.01 (30 °C), 2.03 (35 °C), 2.03 (40 °C), 2.04 (45 °C), 2.04 (50 °C)

Contains:

Name	CAS#	Grade
Hydrochloric Acid, HCl	7647-01-0	ACS
Potassium Chloride, KCl	7447-40-7	ACS
Water, Deionized, H2O	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Clear, colorless, odorless	Passed Test
pH at 25 °C (traceable to NIST SRM 185 & 186)	pH determination	2.000 ± 0.010 pH at 25.0 °C	2.003 pH at 25.0 °C

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Shelf Life (unopened container):

Part Number	Shelf Life
1493-2.5	24 months
1493-32	24 months
1493-5	24 months
1493-1	24 months
1493-1CT	24 months
1493-16	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

LaNelle Ohlhausen
Quality Assurance

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Version: 3

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http://www.riccachemical.com
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Certificate of Analysis

Sodium Thiosulfate, 0.0250 Normal (N/40)

Lot Number: 2203415 Product Number: 7900 Expiration Date: SEP 2013 Manufacture Date:3/14/2012

Contains:

Name	CAS#	Grade
Organic Preservative	Proprietary	Commercial Grade
Sodium Carbonate, Na2CO3	497-19-8	ACS
Sodium Thiosulfate Pentahydrate, Na2S2O3.5H2O	10102-17-7	ACS
Water, Deionized, H2O	7732-18-5	ACS, ASTM D 1193 (Type I), EP, USP

Test Name	Assay Method	Specification	Result
Appearance	Clarity, Color, Odor	Clear, colorless, slight organic odor	Passed Test
Assay at 20 °C (traceable to NIST SRM 136)	Titrimetric vs. Potassium Iodate (Starch Indicator)	0.02500 ± 0.00001 N at 20.0 °C	0.02501 N at 20.0 °C

Specification	Reference	Method Number
Standard Sodium Thiosulfate Solution, 0.0250 N	APHA	4500-S2- F
Standard Sodium Thiosulfate Titrant	APHA	4500-O D
Standard Sodium Thiosulfate Titrant	APHA	4500-O E
Standard Sodium Thiosulfate Titrant	APHA	4500-O F
Standard Sodium Thiosulfate Titrant, 0.025 N	APHA	4500-Cl B
Standard Sodium Thiosulfate Titrant	APHA	4500-O C
Standard Sodium Thiosulfate Titrant, 0.025 M	APHA	5530 C
Standard Sodium Thiosulfate Solution (0.025 N)	EPA (SW-846)	9031
Standard Sodium Thiosulfate solution (0.025 N)	EPA (SW-846)	9034

This product is specially formulated to increase its stability. A preservative is added to prevent bacterial contamination. However, all Sodium Thiosulfate solutions are subject to slow chemical deterioration and should be restandardized periodically.

Shelf Life (unopened container):

Part Number	Shelf Life
7900-2.5	18 months
7900-32	18 months
7900-5	18 months
7900-1	18 months
7900-16	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

LaNelle Ohlhausen
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Version: 1

EMD Chemicals Inc.
480 S. Democrat Road
Gibbstown, NJ 08027
Phone 856–423–6300
Fax 856–423–4389

Name: Magnesium Chloride Hexahydrate
Extra Pure
USP,Ph Eur,BP,FCC,E511

Formula: $MgCl_2 \cdot 6H_2O$

Item Number: 1.05832.9027, 1.05832.9028, 1.05832.9524, 1.05832.9527, 00583292, 1.05832.1000, 1.05832.1000A, 1.05832.9012

Formula Wt: 203.30

Lot Number: A0031132

Data Order No: 000178869

CHARACTERISTIC	REQUIREMENT		RESULTS	UNITS
	Min.	Max.		
Aluminium (Al)		0.0001	< 0.0001	%
pH (5%, water)	4.5	7.0	5.5	
Original Examination Date			6–FEB–2009	
Minimum shelf life			28–FEB–2011	
Assay (complexometric)	99.0	101.0	100.4	%
Mercury (Hg)		0.0001	< 0.0001	%
Water	51.0	55.0	53.7	%
Lead (Pb)		0.0004	< 0.0004	%
Arsenic (As)		0.0002	< 0.0002	%
Iron (Fe)		0.0005	< 0.0005	%
Heavy metals (as Pb)		0.001	< 0.001	%
Sulfate (SO4)		0.005	< 0.002	%
Identification			Passes test	
Acidity or alkalinity			Passes test	
Residual Solvents (Ph.Eur./ICH)			Excluded by manufacturing process	
Insoluble matter		0.005	< 0.005	%
Organic volatile impurities (according to USP)			Meets requirements	
Endotoxins		3.0	< 3.0	I.U./g
Bromide (Br)		0.05	< 0.05	%
Potassium (K)		0.05	< 0.05	%
Calcium (Ca)		0.01	< 0.001	%
Ammonium (NH4)		0.005	< 0.005	%
Appearance of solution			Passes	
Barium (Ba)			Passes test	
Microbial limits–Total aerobic bacteria		100	<100	
Microbial limits–Total combined mold and yeast		100	<100	

Jim Morgera,
Quality Control Manager

Release Date: 4/2/2009

EMD Chemicals Inc.
480 S. Democrat Road
Gibbstown, NJ 08027
Phone 856–423–6300
Fax 856–423–4389

Name: Formaldehyde Solution
GR ACS
Meets ACS Specifications

Formula: HCHO

Item Number: FX0410–1, FX0410–20, FX0410–3, FX0410–5

Formula Wt: 30.03

Lot Number: 52062

Data Order No: 000428713

CHARACTERISTIC	REQUIREMENT		RESULTS	UNITS
	Min.	Max.		
Assay	36.5	38.0	36.55	%
Chloride (Cl)		5	<5	ppm
Color (APHA)		10	<10	
Form			Passes test	
Heavy metals (as Pb)		5	<5	ppm
Iron (Fe)		5	<5	ppm
Residue after ignition		0.005	<0.005	%
Sulfate (SO4)		0.002	<0.002	%
Titrable acid		0.006	<0.006	meq/g

Gene A. Desotelle,
Quality Control Manager

Release Date: 3/7/2012

EMD Chemicals Inc.
(Formerly EM Science, A Division of EM Industries, Inc.)

An Affiliate of Merck KGaA, Darmstadt, Germany

Hydrochloric Acid, 36.5-38.0%

`BAKER INSTRA-ANALYZED® Reagent (For Trace Metal Analysis)

Product No. 9530
Lot No. H04040
Release Date 01/26/2009

Certificate of Analysis

TEST	SPECIFICATION	RESULT
Meets A.C.S. Specifications		
Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.5 %
Color (APHA)	10 max.	5
Residue after Ignition	3 ppm max.	1 ppm
Specific Gravity at 60°/60°F	1.185 - 1.192	1.187
Bromide (Br)	0.005 % max.	< 0.005 %
Extractable Organic Substances	5 ppm max.	< 1 ppm
Free Chlorine (as Cl)	0.5 ppm max.	< 0.5 ppm
Trace Impurities (in ppm):		
Phosphate (PO_4)	0.05 max.	< 0.03
Sulfate (SO_4)	0.5 max.	< 0.3
Sulfite (SO_3)	0.8 max.	< 0.2
Ammonium (NH_4)	3 max.	< 1
Arsenic (As)	0.01 max.	< 0.003
Trace Impurities (in ppb):		
Aluminum (Al)	10 max.	< 0.2
Arsenic and Antimony (as As)	5 max.	< 3
Barium (Ba)	1 max.	< 0.2
Beryllium (Be)	1 max.	< 0.2
Bismuth (Bi)	10 max.	< 1
Boron (B)	20 max.	1
Cadmium (Cd)	1 max.	< 0.3
Calcium (Ca)	50 max.	3
Chromium (Cr)	1 max.	0.5
Cobalt (Co)	1 max.	< 0.3
Copper (Cu)	1 max.	< 0.1
Gallium (Ga)	1 max.	< 0.2
Germanium (Ge)	3 max.	< 2
Gold (Au)	4 max.	< 0.2
Heavy Metals (as Pb)	100 max.	< 50
Iron (Fe)	15 max.	1
Lead (Pb)	1 max.	< 0.5
Lithium (Li)	1 max.	< 0.2
Magnesium (Mg)	10 max.	0.6
Manganese (Mn)	1 max.	< 0.4
Mercury (Hg)	0.5 max.	< 0.1
Molybdenum (Mo)	10 max.	< 3
Nickel (Ni)	4 max.	0.3

Niobium (Nb)	1 max.	0.2
Potassium (K)	9 max.	< 2
Selenium (Se)	Information Only	1
Silicon (Si)	100 max.	< 0.4
Silver (Ag)	1 max.	< 0.3
Sodium (Na)	100 max.	3
Strontium (Sr)	1 max.	< 0.2
Tantalum (Ta)	1 max.	< 0.9
Thallium (Tl)	5 max.	< 2
Tin (Sn)	5 max.	< 0.8
Titanium (Ti)	1 max.	< 0.2
Vanadium (V)	1 max.	< 0.2
Zinc (Zn)	5 max.	4
Zirconium (Zr)	1 max.	< 0.1
Product Information (not specifications):		
Appearance (clear, fuming liquid)		
For Laboratory, Research or Manufacturing Use		

Country of Origin: USA

ISO
Phillipsburg, NJ 9001:2000 & 14001:1996
Paris, KY 9001:2000
Mexico City, Mexico 9001:2000
Deventer, Holland 9001:2000 & 14001:1996
Selangor, Malaysia 9001:2000

Marcy M. Matlosz
Director of QA & Regulatory Affairs

For questions on this Certificate of Analysis please contact Technical Services at 1-800-582-2537 or 908-859-2151
Mallinckrodt Baker, Inc. • 222 Red School Lane • Phillipsburg, NJ 08865 • Phone: 908.859.2151 • Fax: 908.859.6905

J.T.Baker®

Potassium Phosphate, Monobasic, Crystal

`BAKER ANALYZED´® A.C.S. Reagent (potassium dihydrogen phosphate)

Product No. 3246
Lot No. H21149
Release Date 07/13/2009

Certificate of Analysis

TEST	SPECIFICATION	RESULT
Exceeds A.C.S. Specifications		
Meets Reagent Specifications for testing USP/NF monographs		
Assay (KH_2PO_4) (by acidimetry)	99.0 % min.	100.1 %
Insoluble Matter	0.01 % max.	< 0.002 %
Loss on Drying at 105°C	0.2 % max.	< 0.02 %
pH of 5% Solution at 25°C	4.1 - 4.5	4.4
Chloride (Cl)	0.001 % max.	< 0.001 %
Fluoride (F)	0.001 % max.	< 0.0002 %
Nitrogen Compounds (as N)	0.001 % max.	< 0.001 %
Sulfate (SO_4)	0.003 % max.	< 0.002 %
Heavy Metals (as Pb)	0.001 % max.	< 0.0005 %
Iron (Fe)	0.002 % max.	< 0.001 %
Lead (Pb)	0.001 % max.	< 0.001 %
Sodium (Na)	0.005 % max.	0.0009 %
Trace Impurities (in ppm):		
Arsenic (As)	3 max.	< 3

For Laboratory, Research or Manufacturing Use

Country of Origin: USA

ISO
Phillipsburg, NJ 9001:2000 & 14001:1996
Paris, KY 9001:2000
Mexico City, Mexico 9001:2000
Deventer, Holland 9001:2000 & 14001:1996
Selangor, Malaysia 9001:2000

Marcy M. Matlosz
Marcy M. Matlosz
Director of QA & Regulatory Affairs

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Mallinckrodt Baker, Inc. • 222 Red School Lane • Phillipsburg, NJ 08865 • Phone: 908.859.2151 • Fax: 908.859.6905

8 of 8

J.T.Baker®

Sodium Sulfide, 9-Hydrate, Crystal

'BAKER ANALYZED'® A.C.S. Reagent

Product No. 3910
Lot No. H23586
Release Date 06/05/2009

Certificate of Analysis

TEST	SPECIFICATION	RESULT
Meets A.C.S. Specifications		
Meets Reagent Specifications for testing USP/NF monographs		
Assay ($Na_2S \cdot 9H_2O$)	98.0 % min.	100.1 %
Sulfite and Thiosulfate (as SO_2)	0.1 % max.	0.002 %
Ammonium (NH_4)	0.005 % max.	< 0.005 %
Iron (Fe)	Passes Test	Passes Test

For Laboratory, Research or Manufacturing Use

Product may turn slightly yellow on exposure to air. Color has no effect on specifications.

Keep material refrigerated between 2-8°C (36-46°F).

Country of Origin: USA

ISO
Phillipsburg, NJ 9001:2000 & 14001:1996
Paris, KY 9001:2000
Mexico City, Mexico 9001:2000
Deventer, Holland 9001:2000 & 14001:1996
Selangor, Malaysia 9001:2000

Marcy M. Matlon
Director of QA & Regulatory Affairs

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Mallinckrodt Baker, Inc. • 222 Red School Lane • Phillipsburg, NJ 08865 • Phone: 908.859.2151 • Fax: 908.859.6905

Sand

Purified
Washed and Ignited

Product No. 3382
Lot No. H36602
Release Date 09/14/2009

Certificate of Analysis

TEST	SPECIFICATION	RESULT
Meets Reagent Specifications for testing USP/NF monographs		
Substances Soluble in HCl	0.16 % max.	< 0.01 %
For Laboratory, Research or Manufacturing Use		

Country of Origin: USA

ISO
Phillipsburg, NJ 9001:2000 & 14001:1996
Paris, KY 9001:2000
Mexico City, Mexico 9001:2000
Deventer, Holland 9001:2000 & 14001:1996
Selangor, Malaysia 9001:2000

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Mallinckrodt Baker, Inc. • 222 Red School Lane • Phillipsburg, NJ 08865 • Phone: 908.859.2151 • Fax: 908.859.6905

Sulfuric Acid

`BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

Product No. 9673
Lot No. K43061
Release Date 10/26/2011

Certificate of Analysis

TEST	SPECIFICATION	RESULT
Meets A.C.S. Specifications		
Assay (H_2SO_4)	95.0 - 98.0 %	96.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	10 max.	5
Residue after Ignition	3 ppm max.	< 1 ppm
Substances Reducing Permanganate (as SO_2)	2 ppm max.	< 2 ppm
Trace Impurities (in ppm):		
Ammonium (NH_4)	1 max.	< 0.5
Chloride (Cl)	0.1 max.	< 0.05
Nitrate (NO_3)	0.2 max.	< 0.1
Phosphate (PO_4)	0.5 max.	< 0.05
Trace Impurities (in ppb):		
Aluminum (Al)	30 max.	< 0.2
Arsenic and Antimony (as As)	4 max.	< 2
Barium (Ba)	10 max.	< 0.2
Beryllium (Be)	10 max.	< 0.2
Bismuth (Bi)	10 max.	1
Boron (B)	10 max.	2
Cadmium (Cd)	2 max.	< 0.3
Calcium (Ca)	50 max.	0.4
Chromium (Cr)	6 max.	< 0.4
Cobalt (Co)	0.5 max.	< 0.3
Copper (Cu)	1 max.	< 0.1
Gallium (Ga)	10 max.	< 0.2
Germanium (Ge)	10 max.	< 2
Gold (Au)	10 max.	< 0.2
Heavy Metals (as Pb)	500 max.	< 100
Iron (Fe)	50 max.	4.5
Lead (Pb)	0.5 max.	< 0.5
Lithium (Li)	10 max.	< 0.2
Magnesium (Mg)	7 max.	< 0.2
Manganese (Mn)	1 max.	< 0.4
Mercury (Hg)	0.5 max.	0.1
Molybdenum (Mo)	10 max.	< 3
Nickel (Ni)	2 max.	< 0.3
Niobium (Nb)	10 max.	0.2

Potassium (K)	500 max.	< 2
Selenium (Se)	50 max.	19
Silicon (Si)	100 max.	4.3
Silver (Ag)	1 max.	< 0.3
Sodium (Na)	500 max.	< 0.5
Strontium (Sr)	5 max.	< 0.2
Tantalum (Ta)	10 max.	< 0.9
Thallium (Tl)	20 max.	< 2
Tin (Sn)	5 max.	< 0.8
Titanium (Ti)	10 max.	< 0.2
Vanadium (V)	10 max.	< 0.2
Zinc (Zn)	5 max.	< 0.3
Zirconium (Zr)	10 max.	< 0.1
For Laboratory, Research or Manufacturing Use		

Country of Origin: USA

ISO
Phillipsburg, NJ 9001:2008 & 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, Holland 9001:2008 & 14001:2004
Selangor, Malaysia 9001:2008

Richard M. Siberski
Global Director of Quality Assurance

For questions on this Certificate of Analysis please contact Technical Services at 855-282-6867 or 610-573-2600
Avantor ™ Performance Materials. Inc.
3477 Corporate Parkway • Suite #200 • Center Valley, PA 18034 • U.S.A. • Phone: 610.573.2600 • Fax: 610.573.2610

THE POWER OF THREE[3]
PHARMCO-AAPER
AND COMMERCIAL ALCOHOLS

CERTIFICATE OF ANALYSIS
SODIUM HYDROXIDE PELLETS
ACS/USP/NF/FCC GRADE

Lot # PB002849SP
QC # NP9044
Date of Manufacture: 01/20/10
Expiration Date: Three Years from Date of Manufacture
Main Catalog #: 289USP/NF, xf2890000NF

Parameter	Monograph	Specification	Result
Assay (as NaOH)	ACS NF FCC	97.0% min. 95.0% - 100.5% 95.0% - 100.5%	99.52%
Identification	NF	To Pass Test	Pass
Na_2CO_3	ACS NF FCC	1.0% max. 3.0% max 3.0% max	0.31%
Sulfate (SO_4)	ACS	0.003% max.	<0.003%
Chloride (Cl)	ACS	0.005% max.	<0.005%
Nitrogen Compounds (as N)	ACS	0.001% max.	<0.001%
Phosphate (PO_4)	ACS	0.001% max.	<0.001%
Heavy Metals (as Ag) Heavy Metals (as Pb) Lead (Pb)	ACS NF FCC	0.002% max 0.003% max. 2ppm max.	<0.002% <0.002% <2ppm
Iron (Fe)	ACS	0.001%	<0.001%
Nickel (Ni)	ACS	0.001% max.	<0.001%
Mercury (Hg)	ACS FCC	0.1ppm max.	<0.1ppm
Calcium (Ca)	ACS	0.005% max.	<0.005%
Magnesium (Mg)	ACS	0.002% max.	<0.002%
Potassium (K)	ACS NF	0.02% To Pass Test	<0.02% Pass
Arsenic (As)	FCC	3ppm max.	<3ppm
Insoluble Substances and Organic Matter	NF FCC	To Pass Test	Pass

Form: Sodium Hydroxide, ACS/USP/NF/FCC, #101, rev. 2.6, 09/08, EF

Approved by: E. Frenkel, Director of Quality Control

SHIPPING DOCUMENTS

E3847

USEPA
DateShipped 9/25/2013
CarrierName: Courier Pick Up
AirbillNo N/A

CHAIN OF CUSTODY RECORD
RFP No. 265 / Weston Solutions
Contact Name:
Contact Phone:

No: 2-092513-130258-0040
Cooler # 1 of 1
Lab: ChemTech
Lab Phone:

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
1	P001-DG-2087-1	Area 02	RCRA Characteristics	Sludge Waste	9/25/2013	10:00	1	8-oz. jar	4 C	N
2	P001-DW-2058-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	10:10	1	8-oz. jar	4 C	N
3	P001-DW-2059-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	10:20	1	8-oz. jar	4 C	N
4	P001-DW-2060-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	10:30	1	8-oz. jar	4 C	N
5	P001-DW-2062-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	10:40	1	8-oz. jar	4 C	N
6	P001-DW-2063-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	11:00	1	8-oz. jar	4 C	N
7	P001-DW-2065-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	11:10	1	8-oz. jar	4 C	N
8	P001-DW-2067-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	11:15	1	8-oz. jar	4 C	N
9	P001-DW-2073-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	11:25	1	8-oz. jar	4 C	N
10	P001-DW-2074-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	11:30	1	8-oz. jar	4 C	N
11	P001-DW-2076-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	11:35	1	8-oz. jar	4 C	N
12	P001-DW-2086-1	Area 02	RCRA Characteristics	Liquid Waste	9/25/2013	11:45	1	8-oz. jar	4 C	N
13	P001-DW-5001-3	Area 05	RCRA Characteristics	Liquid Waste	9/24/2013	15:00	1	8-oz. jar	4 C	N
14	P001-DW-5002-3	Area 05	RCRA Characteristics	Liquid Waste	9/24/2013	15:05	1	8-oz. jar	4 C	N
15	P001-DW-5006-3	Area 05	RCRA Characteristics	Liquid Waste	9/24/2013	15:10	1	8-oz. jar	4 C	N
16	P001-DW-5006-4	Area 05	RCRA Characteristics	Liquid Waste	9/24/2013	15:15	1	8-oz. jar	4 C	N
17	P001-DW-5009-3	Area 05	RCRA Characteristics	Liquid Waste	9/24/2013	15:20	1	8-oz. jar	4 C	N
18	P001-DW-5013-3	Area 05	RCRA Characteristics	Liquid Waste	9/24/2013	15:25	1	8-oz. jar	4 C	N

Special Instructions: RFP No. 265

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Courier Pick		9/25/13		9/25/13	1500			9/25/13 1640		9/25/13	16:50

Temp: 4°C

*In E3848
E3847

USEPA
DateShipped 9/25/2013
CarrierName: Courier Pick Up
AirbillNo N/A

CHAIN OF CUSTODY RECORD
RFP No. 265 / Weston Solutions
Contact Name:
Contact Phone:

No: 2-092513-130258-0040
Cooler # 1 of 1
Lab: ChemTech
Lab Phone:

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	MS/MSD
19	P001-DW-5023-3	Area 05	RCRA Characteristics	Liquid Waste	9/24/2013	15:30	1	8-oz. jar	4 C	N
20	P001-DW-5024-3	Area 05	RCRA Characteristics	Liquid Waste	9/24/2013	15:35	1	8-oz. jar	4 C	N
*1	P001-DW-5027-3	Area 05	RCRA Characteristics	Liquid Waste	9/24/2013	15:40	1	8-oz. jar	4 C	N
*2	P001-DW-5029-3	Area 05	RCRA Characteristics	Liquid Waste	9/24/2013	15:45	1	8-oz. jar	4 C	N
*3	P001-DW-6006-3	Area 06	RCRA Characteristics	Liquid Waste	9/24/2013	15:50	1	8-oz. jar	4 C	N
*4	P001-DW-6009-3	Area 06	RCRA Characteristics	Liquid Waste	9/24/2013	15:55	1	8-oz. jar	4 C	N
*5	P001-DW-6010-3	Area 06	RCRA Characteristics	Liquid Waste	9/24/2013	16:00	1	8-oz. jar	4 C	N
*6	P001-DW-6011-3	Area 06	RCRA Characteristics	Liquid Waste	9/24/2013	16:05	1	8-oz. jar	4 C	N
*7	P001-DW-6017-3	Area 06	RCRA Characteristics	Liquid Waste	9/24/2013	16:10	1	8-oz. jar	4 C	N
*8	P001-DW-6018-3	Area 06	RCRA Characteristics	Liquid Waste	9/24/2013	16:15	1	8-oz. jar	4 C	N
*9	P001-DW-6021-3	Area 06	RCRA Characteristics	Liquid Waste	9/24/2013	16:20	1	8-oz. jar	4 C	N
*10	P001-DW-6024-3	Area 06	RCRA Characteristics	Liquid Waste	9/24/2013	16:25	1	8-oz. jar	4 C	N

Special Instructions: RFP No. 265

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time

Copy
Original Documents are included in CSF

E3848

Signature

9/25/13
Date

Plz make below changes to login

Thanks,

Mohammad Ahmed

Lab Manager

Direct line: (908)-728-3151

Fax: (908)-789-8922

signature

From: AMIT [mailto:APATEL@CHEMTECH.NET]
Sent: Thursday, September 26, 2013 8:27 AM
To: Mohammad Ahmed
Subject: need to change login

E3847-19

E3848-06 to ignitability

Amit Patel

Laboratory Certification

State	License No.
New Jersey	20012
New York	11376
Connecticut	PH-0649
Florida	E87935
Louisiana	5035
Maryland	296
Massachusetts	M-NJ503
Pennsylvania	68-548
Rhode Island	LAO00259
Virginia	460220
Texas	T10470448-10-1

Other :

DOD ELAP Certified (L-A-B Accredited), ISO/IEC 17025	L2219
Soil Permit	P330-11-00012
CLP Inorganic Contract	EPW09038
CLP Organic Contract	EPW11030

QA Control Code: A2070148